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# BETTER FRUIT

VOLUME VII

AUGUST, 1912

NUMBER 2

## PRUNE SPECIAL



PRUNES GROWN  
IN CLARKE COUNTY  
IN THE  
SOUTHWESTERN  
PART OF THE  
STATE OF  
WASHINGTON

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Tacoma Commercial  
Club and  
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BETTER FRUIT PUBLISHING COMPANY, PUBLISHERS, HOOD RIVER, OREGON

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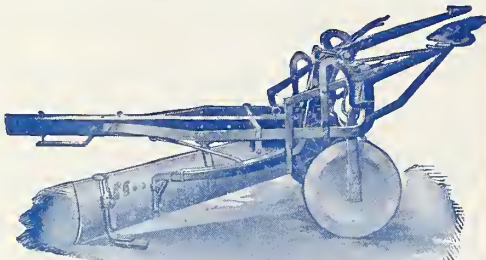
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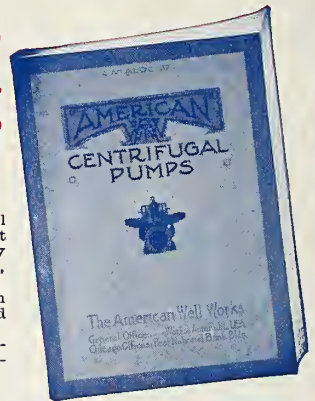
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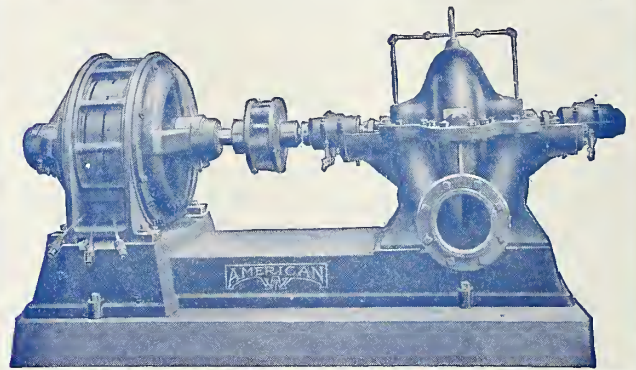


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## Northwest Fruit Growers' Unions and Associations

We publish free in this column the name of any fruitgrowers' organization. Secretaries are requested to furnish particulars for publication.

### Oregon

Eugene Fruit Growers' Association, Eugene; Ashland Fruit and Produce Association, Ashland; Hood River Apple Growers' Union, Hood River; Milton Fruit Growers' Union, Milton; Douglas County Fruit Growers' Association, Roseburg; Willamette Valley Prune Association, Salem; Mosier Fruit Growers' Association, Mosier; The Dalles Fruit Growers' Union, The Dalles; Salem Fruit Union, Salem; Albany Fruit Growers' Union, Albany; Coos Bay Fruit Growers' Association, Marshfield; Estacada Fruit Growers' Association, Estacada; Umpqua Valley Fruit Growers' Association, Roseburg; Hyland Fruit Growers of Yamhill County, Sheridan; Newburg Apple Growers' Association, Newburg; Dufur Valley Fruit Growers' Union, Dufur; McMinnville Fruit Growers' Association, McMinnville; Coquille Valley Fruit Growers' Union, Myrtle Point; Stanfield Fruit Growers' Association, Stanfield; Oregon City Fruit and Produce Association, Oregon City; Lincoln County Fruit Growers' Union, Toledo; Rogue River Fruit and Produce Association, Medford; Mount Hood Fruit Growers' Association, Sandy; Northeast Gaston Farmers' Association, Forest Grove; Dallas Fruit Growers' Association, Dallas; Northwest Fruit Exchange, Portland; Springbrook Fruit Growers' Union, Springbrook; Cove Fruit Growers' Association, Cove; Santiam Fruit Growers' Association, Lebanon; Washington County Fruit Growers' Association, Hillsboro; Benton County Fruit Growers' Association, Corvallis; Sutherlin Fruit Growers' Association, Sutherlin; Brownsville Fruit and Produce Association, Brownsville; La Grande Fruit Association, La Grande; Imbler Fruit Growers' Union, Imbler; Dundee Fruit Growers' Association, Dundee.

### Washington

Kennewick Fruit Growers' Association, Kennewick; Wenatchee Valley Fruit Growers' Association, Wenatchee; Wenatchee District Fruit Growers' Union, Wenatchee; Brewster Fruit Growers' Union, Brewster; Peshastin Fruit Growers' Association, Peshastin; Puyallup and Sumner Fruit Growers' Association, Puyallup; Vashon Island Fruit Growers' Association, Vashon; Mount Vernon Fruit Growers' Association, Mount Vernon; White Salmon Fruit Growers' Union, White Salmon; Thurston County Fruit Growers' Union, Tumwater; Bay Island Fruit Growers' Association, Tacoma; Yakima Valley Fruit and Produce Growers Association, Granger; Buckley Fruit Growers' Association, Buckley; Lewis River Fruit Growers' Union, Woodland; Yakima County Horticultural Union, North Yakima; White River Valley Fruit and Berry Growers' Association, Kcnt; Lake Chelan Fruit Growers' Association, Chelan; Zillah Fruit Growers' Association, Toppenish; Kiona Fruit Growers' Union, Kiona; Mason County Fruit Growers' Association, Shelton; Clarkston Fruit Growers' Association, Clarkston; Walla Walla Fruit and Vegetable Union, Walla Walla; The Ridgefield Fruit Growers' Association, Ridgefield; Felida Prune Growers' Association, Vancouver; Grandview Fruit Growers' Association, Grandview; Yakima Valley Fruit Growers' Association, North Yakima; Southwest Washington Fruit Growers' Association, Chehalis; The Touchet Valley Fruit and Produce Union, Dayton; Lewis County Fruit Growers' Association, Centralia; The Green Bluffs Fruit Growers' Association, Mead; Garfield Fruit Growers' Union, Garfield; Goldendale Fruit and Produce Association, Goldendale; Spokane Inland Fruit Growers' Association, Kelso; Elma Fruit and Produce Association, Elma; Granger Fruit Growers' Association, Granger; Cashmere Fruit Growers' Union, Cashmere; Stevens County Fruit Growers' Union, Myers Falls; Dryden Fruit Growers' Union, Dryden; Apple Growers' Union of White Salmon, Underwood; Spokane Valley Growers' Union, Spokane; Spokane County Horticultural Society, Spokane; Spokane Highlands Fruit Growers' Association, Chester; Spokane District Fruit Growers' Association, Spokane; Cowlitz Fruit and Produce Association, Kelso; Kalama Fruit Growers' Association, Kalama; Pullman Fruit Growers' Association, Pullman.

### Idaho

Southern Idaho Fruit Shippers' Association, Boise; New Plymouth Fruit Growers' Association, New Plymouth; Payette Valley Apple Growers' Union, Payette; Parma-Roswell Fruit Growers' Association, Parma; Weiser Fruit and Produce Growers' Association, Weiser; Council Valley Fruit Growers' Association, Council; Nampa Fruit Growers' Association, Nampa; Lewiston Orchards Assembly, Lewiston; Lewiston Orchards Association, Lewiston; Boise Valley Fruit Growers' Association, Boise; Caldwell Fruit Growers' Association, Caldwell;

Emmett Fruit Growers' Association, Emmett; Twin Falls Fruit Growers' Association, Twin Falls; Weiser River Fruit Growers' Association, Weiser; Fruit Growers' Association, Moscow.

### Colorado

San Juan Fruit and Produce Growers' Association, Durango; Fremont County Fruit Growers' Association, Canon City; Rocky Ford Melon Growers' Association, Rocky Ford; Plateau and Debeque Fruit, Honey and Produce Association, Debeque; The Producers' Association, Debeque; Surface Creek Fruit Growers' Association, Austin; Longmont Produce Exchange, Longmont; Manzanola Fruit Association, Manzanola; Delta County Fruit Growers' Association, Delta; Boulder County Fruit Growers' Association, Boulder; Fort Collins Beet Growers' Association, Fort Collins; La Junta Melon and Produce Company, La Junta; Rifle Fruit and Produce Association, Rifle; North Fork Fruit Growers' Association, Paonia; Fruita Fruit and Produce Association, Fruita; Grand Junction Fruit Growers' Association, Clifton, Palisade, Grand Junction; Palisade Fruit Growers' Association, Palisade; Colorado Fruit and Commercial Company, Grand Junction; Montrose Fruit and Produce Association, Montrose; Hotchkiss Fruit Growers' Association, Hotchkiss; Paonia Fruit Exchange, Paonia; Colorado Fruit Growers' Association, Delta; Crawford Fruit Growers' Association, Crawford; Amity Cantaloupe Growers' Association, Amity; Pent County Melon Growers' Association, Las Animas; Capitol Hill Melon Growers' Association, Rocky Ford; Denver Fruit and Vegetable Association, Denver; Fair Mount Melon Growers' Association, Swink; Fowler Melon Growers' Association, Fowler; Granada Melon Growers' Association, Granada; Grand Valley Fruit and Produce Association, Grand Junction; Independent Fruit Growers' Association, Grand Junction; Kouns Party Cantaloupe Growers' Association, Rocky Ford; Lamar Melon Growers' Association, Lamar; Loveland Fruit Growers' Association, Loveland; Manzanola Orchard Association, Manzanola; Newdale Melon Growers' Association, Swink; Roaring Fork Potato Growers' Association, Carbondale; Woods Melon Growers' Association, Las Animas; Western Slope Fruit Growers' Association, Palisade.

### Montana

Bitter Root Fruit Growers' Association, Hamilton; Missoula Fruit and Produce Association, Missoula; Woodside Fruit Growers' Association, Woodside.

### Utah

Farmers and Fruit Growers' Forwarding Association, Centerville; Ogden Fruit Growers' Association, Ogden; Brigham City Fruit Growers' Association, Brigham City; Utah County Fruit and Produce Association, Provo; Willard Fruit Growers' Association, Willard; Excelsior Fruit and Produce Association, Clearfield (Post-office Layton R. F. D.); Centerville Fruit Growers' Association, Centerville; Bear River Valley Fruit Growers' Association, Bear River City; Springville Fruit Growers' Association, Springville; Cache Valley Fruit Growers' Association, Wellsville; Green River Fruit Growers' Association, Green River; Farmers and Fruit Growers' Forwarding Association, Centerville.

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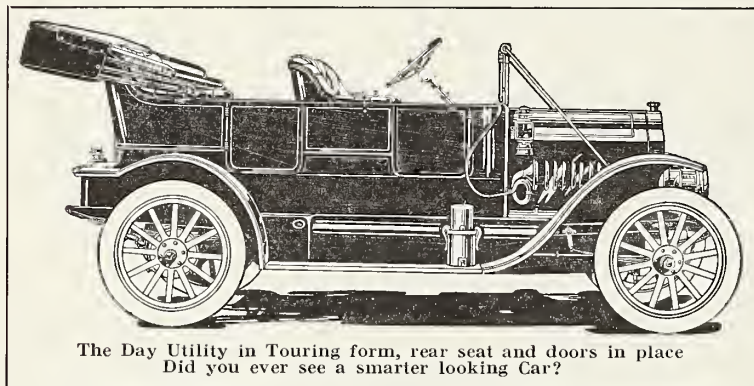
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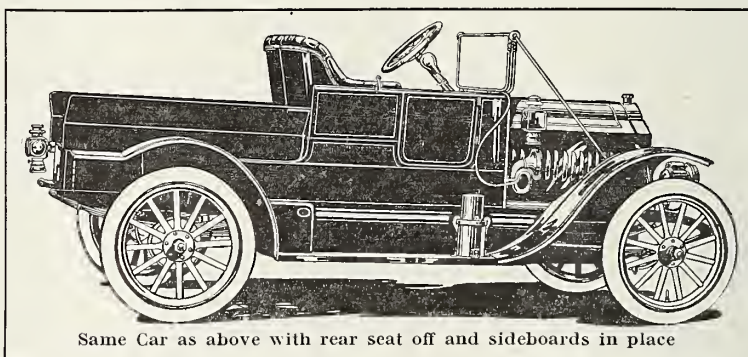
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A car that will do the work of two or three horses—do it better and quicker, and one that is never too tired after the day's work is over to take the family out for a thirty or forty or fifty-mile spin in the evening.



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# BETTER FRUIT

AN ILLUSTRATED MAGAZINE PUBLISHED MONTHLY IN THE INTEREST OF MODERN, PROGRESSIVE FRUIT GROWING AND MARKETING

## Insects Attacking the Prune in the Pacific Northwest

By Professor A. B. Cordley, Oregon Agricultural College, Corvallis, Oregon

OF all orchard fruits of the Pacific Northwest the prune probably suffers least from the attacks of insects. True, the San Jose scale, which attacks practically all of our deciduous fruits, often does considerable damage to neglected orchards, and the Western peach and prune borer is likely to do more or less injury unless carefully guarded against. There are also two or three other species which, while of comparatively little importance, may, from time to time, do considerable injury to individual trees or orchards, and a considerable number of species which occasionally attract attention. The first two species are so well known and the others are of so comparatively little importance that it hardly seems necessary to take up valuable space in an exhaustive article on each species. However, it is hoped they will be found sufficiently detailed and clear to enable the beginning prune grower to recognize the various species.

The Western Peach and Prune Borer (*Sanninoidae opalecens*).—On the Pacific Coast this species occupies the same relative position in the field of economic entomology that the Eastern peach borer does in the regions east of the Rocky Mountains. It is found throughout the Coast region, where it attacks the almond, peach and prune principally, although it is known to attack other trees occasionally. Under favorable conditions, and particularly in neglected orchards, it may do an immense amount of damage. In the prune regions of the Northwest it appears to be injurious principally to trees growing in the more loamy soils and, so far as my observation goes, is apparently more injurious to prune trees growing on peach stock. The adult insect is a bluish-black moth about one inch long and with a wing expansion of about one and one-half inches. The wings are transparent, with blue-black borders. These moths begin to appear in June and may continue to issue until at least September 1. They are active, warmth-loving insects, fly actively in the hot, bright sunshine, and while they are rarely noticed by the orchardists may be noted in infested orchards during all this season. After mating the females deposit their eggs upon the bark of the trunks, usually near the ground, but occasionally as high as one or two feet above. The egg stage lasts from a week to ten days, depending upon temperature, and as soon as hatched the young larva seeks a suitable place in which to enter the bark. The earliest larvae

will thus begin their attacks not far from July 1, and those which are hatched later may continue to enter until well toward the first of October. The point of entrance may readily be detected upon close observation by the presence of a minute pellet of sawdust-like casting. Later this disappears and the presence of borers is exceedingly difficult to detect until they are well grown or until they are indicated by a flow of gum from the wound. During

Remedies and Preventives: There is practically no remedy known other than to dig out and destroy the borers whenever found. Indeed this has been the most efficient step in the control of this insect. The more careful and successful prune growers find it advantageous to go over the orchard carefully twice each year for this purpose. The first examination should be made in the fall after the ground has been softened by the fall rains. The soil should be dug away from the base of the trees to a depth of six to eight inches, and whenever the presence of a borer is indicated by the presence of gum careful search should be made for it. Needless to say, a sharp knife should be used, the search for the larvae should be conducted with as little cutting as possible and the edges of the wound should be trimmed and left as smooth as possible. If the wound were then covered with grafting wax, thick paint or thick bordeaux mixture less danger of entrance of rot-producing fungi would result, but practically this is rarely done. At the time of the fall inspection many of the larvae are too small to be readily detected, hence the necessity of a second inspection in spring. This should be made in the same manner as the first and some time previous to June 1. The object of this examination, of course, is not so much to protect the tree from injury, which has already been done, but to destroy the larvae and thus prevent the emergence of the moths and the consequent infestation by another generation. The object of preventive applications is to deter the moth from depositing eggs upon the bark or to destroy the young larvae before they can enter it. For more than one hundred years entomologists and fruitgrowers have experimented with many different applications against the Eastern species, but with more or less indifferent success. Recently, however, the California Experiment Station reports their results of some four years' tests, in which they have succeeded in preventing approximately ninety-five per cent of injury from this insect, and while these experiments were conducted upon the peach in California and have not as yet, so far as I know, been tested in the Northwest upon the prune, the results appear so conclusive that we are inclined to believe that the California method offers the best prospect of success of any of the preventive methods. The method consists in "the use of hard asphaltum, grades 'C' and 'D'. This was applied early in

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THE PRUNE INDUSTRY FROM THE PACKER'S STANDPOINT

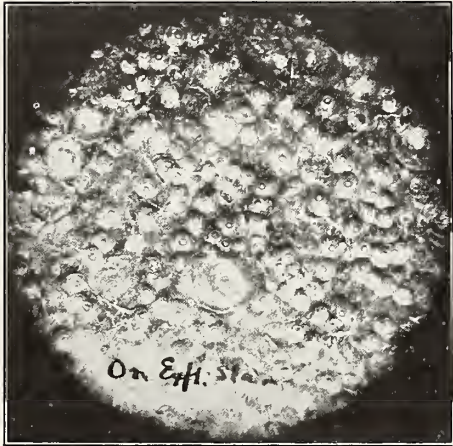
FERTILIZATION OF PRUNE ORCHARDS

PRUNING OF THE PRUNE

their development the larvae feed between the bark and the wood, constructing irregular galleries. A single larvae may thus completely girdle a small tree, and even larger trees may be killed by the galleries of several larvae. Toward fall the presence of the older larvae is indicated by a copious flow of gum from the wound, this being mixed with the sawdust-like castings. The borers remain in their galleries all winter, resume feeding in spring and when full grown construct cocoons of silken threads, castings and any other debris which may be convenient. These cocoons may be constructed either in the galleries or in the soil within an inch or so of the base of the trees. The older larvae begin constructing their cocoons about the first of May, and as the different larvae vary greatly in size the cocoons of the younger larvae may not be constructed until August, or even later. Within the cocoon the larvae change to the pupal stage, and after remaining in this condition about one month there emerge the beautiful blue moths whose function is to continue the species by depositing eggs for another generation.



the spring to badly infested trees from which the borers had not been dug. It was found that a heavy coat prevented both the issuance and the entrance of about ninety-five per cent to ninety-eight per cent of the insects, the degree of efficiency depending upon the thoroughness of the application. Asphaltum does not penetrate, crack, deteriorate or bind the tree, since it yields to the slightest pressure. Four years of experimenting have not shown the



San Jose Scale. Small section of bark covered with scale, magnified

least injury. The material is applied warm with a brush from five inches below to five inches above the ground. It is easier to apply two or more coatings than to try to put on more at one time than will adhere firmly. The first coating will harden very quickly and the second can be applied without loss of time. Two coatings are generally sufficient unless the bark is very rough, but in any case a thick, uniform covering is absolutely necessary for the best results. A convenient way to handle the asphaltum is to mount an iron kettle on the running gear of an orchard truck and suspend beneath it a sheet-iron apron as a fire-box. Keep hard asphaltum in the kettle all the time so that the melted asphaltum will not get too hot to carry in small containers and apply directly to the trees." Of course, should this method prove as efficient in protecting prune trees in the Northwest as the California experiments indicate, the fall and spring examinations can be omitted, but until this has been demonstrated it will, of course, be safest to proceed as usual.

The San Jose Scale (*Aspidiotus perniciosus*).—This insect is so well known and the best methods of controlling it are so generally understood that little regarding it need be said. To be sure, it is the most destructive of all pests in neglected orchards. Nevertheless by intelligent effort it can be controlled more easily than any other first-class orchard pest, and in fact this is true to such an extent throughout the Pacific Northwest that experienced orchardists no longer consider it an orchard problem. However, so many novices are now engaging in orcharding that any consideration of the subject of prune insects should contain some reference to this pest. Perhaps

the worst feature of an attack by San Jose scale is that, owing to its small size and inconspicuous color, it often remains unnoticed until the tree has been seriously injured. That the tree lacks vigor may be recognized, but the cause of its unthriftness is overlooked. Yet it is not difficult to detect when one really looks for it. In the early stages of infestation a few scales may be found usually clustered about the buds of the preceding season's growth, or even on two-year-old wood. In badly infested trees the insects may spread to the larger branches. Mature scales are grayish in color, usually, but not always, somewhat lighter in color than the bark to which they are so closely attached. The immature, half-grown scales, which may be found mingled with the mature ones, are darker in color.

On badly infested plants the young scales feed wherever there is room to insert their beaks into the bark, and as they increase in size they become much crowded and overlapped, thus producing the appearance of a gray, scurf deposit on the bark. The natural color of the bark is obscured and the infested part appears as though coated with fine ash-colored bran. If the thumb nail or other object be rubbed over this scurf covering, if the scales are alive the insects beneath the scales will be crushed, a moist or oily appearance be produced and many of the little yellow insects be exposed to view. During the early stages of an attack very few, if any, of the scales feed upon the leaves or fruit; later both may be attacked. Upon the leaves, especially of prune and peach, the young scales may be found on both surfaces, many particularly clustered along the midrib. In such places each scale produces a minute purple spot. Upon purple plums, red apples, etc., the scale appears only as a minute gray speck, usually clustered about the cavities at either end, but upon yellow fruits, like pears, peaches and yellow plums and apples, each scale produces a bright reddish discoloration. When badly infested the fruit, particularly of pears and apples, becomes much pitted, distorted in shape, cracked and unmarketable. This distortion and cracking, however, does not occur upon the prune.

Remedies: There is but one remedy yet discovered which need be considered, that is lime-sulphur spray, applied preferably in fall soon after the leaves fall or in spring before the buds start. Most growers prefer to use the commercial lime-sulphur sprays. As sold in the market these usually test 30 degrees to 32 degrees Beaume, and for San Jose scale applications should be diluted at the rate of one gallon to ten gallons water. Using this spray at this strength the degree of success is proportional to the thoroughness of the application. The liquid should be applied in the form of a coarse driving spray at high pressure and every particle of the infested bark should be thoroughly saturated. Failure to do thorough work

is practically the only reason for lack of perfectly satisfactory results.

Prune Twig Miner (*Anarsia lineatella*).—More than eighty years ago an Austrian described a little Tineid moth which has since become rather noted. It was first discovered in this country in 1880 in plum twigs. In the East it is usually referred to as the peach twig miner. In California, where it has caused a loss of nearly one-half million dollars a year, it is known as the peach worm or prune worm. In this state it has attracted more attention by reason of its attacks on prune trees, and it is commonly known as the prune twig miner. The moth is a delicate little species not one-half inch long. When the wings are extended it is a little over one-half inch from tip to tip. It is of a slate, or possibly a steel-blue, color marked with many blue-black lines. The larvae winter in a half-grown condition in little cavities which they excavate in the bark, usually at the crotches where the new growth joins the old, although they may be found almost anywhere upon the trees. These cavities, two or three times the size of the larvae, are lined with silk, and there extends up from each cavity of the bark a silken tube which at the surface is covered with a little mound of pellets of masticated bark, and this is the only evidence of the presence of this larvae. Half-grown larvae remain in these cavities until the sap starts in spring, the last of March or the first of April.



Tent Caterpillars  
a. Shells of egg masses; b. "Tent" of young colony

Then they begin to feed on the tender bark around the cavity. Later they begin to tear away the silken covering to their chamber, and in ten days or two weeks after becoming active they leave these chambers and roam about on the outer bark for two or three days. This emergence from winter quarters occurs just at the time the new shoots are starting to grow and each larva usually repairs to the tip of a shoot and begins to bur-

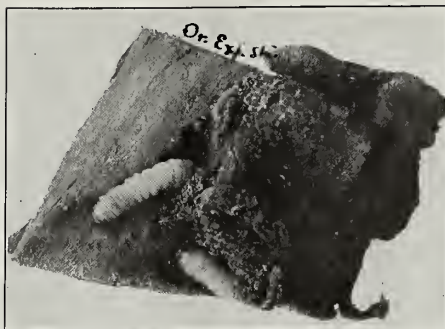


row its way in, sometimes at the side of the shoot. After burrowing for some distance it may leave the burrow and attack another shoot, so that a single larva may kill a variable number of twigs.

Upon prunes it is usual for a larva to tunnel throughout the entire length of the shoot with the result that the shoot dies, and its browned and withered leaves are almost proof positive of the presence of the twig miner, for no other insect causes the death of growing peach and prune twigs at this time of the year. As the larvae become mature, usually in April or May, they leave the burrows and, selecting a place either between two leaves, or more frequently on the bark of the trunk, they spin a few threads of a cocoon and pupate. On peach trees this usually occurs in the little cavities caused by curling of the bark. From these pupae moths are produced, which deposit eggs upon the young shoots at the base of the leaves. The eggs are minute, cream-colored objects, which later become orange colored and are quite conspicuous. The larvae which hatch from these eggs are reported in California to likewise feed upon the growing shoots, in the pits of peaches, and I presume they do here in prunes, although I have never found them. After the second brood of larvae become full grown they pupate as do the first brood, and later develop a second brood of moths which deposit eggs for a third generation of larvae. These feed principally upon the leaves until fall when they retire to the branches, where they construct their cocoons in which to pass the winter.

**Remedies:** The remedy which is recommended for this pest is to spray in spring just as the buds start with winter strength lime-sulphur, the idea being that the over-wintering larvae may thus be destroyed. In this state it has rarely, if ever, been necessary to make a special application for this insect, but should it ever become sufficiently abundant to justify special measures I am of the opinion that far better results may be obtained by an application of arsenate of lead to the trees in fall immediately after the fruit has been gathered. It is at this time, as noted above, that the third generation larvae are feeding upon the foliage.

**Bud Moth (*Tmetocera ocellana*).**—While this is an entirely distinct species, which sometimes attacks the prune, it so closely resembles the twig miner in wintering habits, appearance of larvae and means of control that it is hardly necessary to give it extended notice. The half-grown larvae winter in inconspicuous cocoons upon the twigs. In spring they leave their winter quarters and feed upon both foliage and blossoms. While the twig miner works only upon stone fruits the bud moth evidently prefers the apple and pear and does not so seriously injure the prune. As in the case of the twig miner three generations are produced during the season, the third generation of larvae feeding upon the foliage in



Prune Borer in Section of Trunk

fall and when half-grown retiring to the branches. Like the twig miner, it is most easily controlled by a fall application of arsenate of lead.

The Shot Hole Borer (*Xyleborus dispar*).—This little beetle has been the cause of much discussion in both Europe and America, and many have been the debates as to whether it attacks healthy or unhealthy trees. After spending a great deal of time making observations on this insect we are led to believe that, perhaps with rare exceptions, only trees in a more or less unhealthy condition are attacked. In several instances we have been taken to orchards where the grower was very decided in his opinion that the infested trees were absolutely sound until the arrival of the beetles. I do not believe that in any case after the condition of the trees had been shown and the reasons had been before the grower that he still believed the beetles the primary cause of the injury. Many times where a few sickly and dying trees were badly infested with the beetles many more trees were found without a single burrow, such trees having died from winter injury or some other cause. The



Tent Caterpillar  
Single larva on leaf, natural size

nature of the habits of the beetles themselves would prohibit any such result unless it be that the adult insects carried with them and spread some fungus disease which acts as the direct agent of destruction. With the exception of very small trees, one or two years old, none were attacked in vital parts. If the parts of the tree wherein the real growth takes place were attacked and injured or destroyed there might be some real cause for accusing the insect of great harm. However, as the larvae do not themselves feed on the wood of the tree and the burrows made by the adults lie within the heartwood, there is not a great deal of damage done unless it be that the trees are so weakened by the burrows that they are easily broken off. This would seem to be the case of very young trees, as the burrow is usually made in a circle around the tree just inside the inner part of the woody tissues. Orchardists examining newly set out trees which have died during the spring or summer find that almost a touch will break them off. When examined, the burrows of the beetles are at once noticed and the death of the tree laid to them. Again, however, all the evidence which we have been able to collect plainly indicates that the beetles are secondary and that they are there only because the trees were in a dying condition, and that such conditions afford them a home for constructing their galleries and raising their young.

The life history seems to be about as follows: The adult beetles, which are little brownish-black cylindrical creatures about one-tenth inch in length, come forth from their winter quarters early in the spring and searching for a dying or sickly tree, sometimes fruit, sometimes forest trees, begin making a burrow straight into the heartwood. Usually this burrow is started at the base of a bud or in a scar of some kind. Having penetrated in for a short distance they may either start a burrow up or down or around parallel with the bark. If they start up or down they go but a short distance and then come back to the original burrow and penetrate deeper into the sapwood, where they construct another burrow downward or upward, and similar to the first. A series of these are usually made, although not in any regularity. Having started these burrows there appears in them, either by accident or by the agency of the beetles themselves, a fungus growth which is later the food of the larvae. This growth having been started, the beetles deposit their eggs in clusters of from four to six and return toward the mouth of the original burrow, where they stop up the opening with their bodies, apparently for the purpose of keeping out such enemies as might enter and destroy the eggs or larvae. These eggs hatch into small white grubs which feed and grow until they are just about the diameter of the burrow. This stage is reached in the middle of the summer, and lying end to end they pupate and later change to adult beetles. Upon



opening up a burrow at the time when all have reached the beetle stage two forms will be found, the majority of which are females and appear as stated before; the other form appears much shorter and is quite broad in comparison to their length. They are the males and usually differ somewhat in color from the females. If undisturbed both males and females will remain in these burrows until the following spring, and apparently without food, although they have been observed feeding on a heartrot fungus which later



Prune Borer Moth at Rest on Fruit

crowds into the burrows. It is not known just when copulation between males and females takes place, but with the approach of spring both leave the burrows, which fill up with the heartrot, and later push out through the burrows and form shelf-like projections such as are frequently seen on dead trees. The principal trees attacked in Oregon are the cherry and prune, perhaps due to the fact that more of these die from winter injury or other unfavorable conditions. Other fruit trees which to a more or less degree afford a home for this species are the plum, peach and apple. Reports from Europe and America show that we may expect to find this pest on any of our deciduous forest trees.

Cicadas, or Harvest Flies.—One of the injuries to prune branches most often referred to the entomologist consists of a conspicuous, irregular double row of punctures in the bark, through each of which a small "brush" of splintered wood protrudes. This injury is caused by a female cicada in the act of depositing her eggs. These insects are closely related to the celebrated seventeen-year "locust" which occasionally does such serious damage to fruit and forest trees in the Eastern States, but differs from that insect in several respects, the most important of which is the fact that whereas that occurs in a given locality only once in seventeen years our native species occurs annually. The young, or nymphs, of this insect live entirely underground and do no appreciable harm. When fully grown they emerge from the ground, ascend trees or other objects and soon become firmly attached. In a short time the skin splits down the back and

the adult insect emerges. After pairing each female resorts to some tree and proceeds to deposit her several hundred eggs. Selecting a suitable twig, with her strong, saw-like ovipositor she makes a ragged double puncture in it and deposits an egg in each. Then moving forward she repeats the operation. This process is continued until a row of perhaps a dozen punctures have been made, when she repairs to another twig and repeats the operation. One female may thus injure a large number of twigs before her supply of eggs is exhausted. The wounds made by this process are almost invariably found on twigs not more than one-half the diameter of an ordinary lead pencil, and so weaken them that they are easily broken by the wind during the first or second season. If this does not occur no serious injury is done, since the young cicada as soon as hatched drop to the ground without working upon the tree at all. Fortunately these insects are not numerous, and a very large proportion of their eggs are deposited upon other than fruit trees. It is the conspicuous nature of the injuries rather than their frequency which brings them so prominently before the attention of orchardists. There is, however, no cause for alarm, and no remedial or preventive measures need be employed.

The Branch and Twig Borer.—Very rarely prune trees in this state are injured by this beetle (*Polycæon confertus*), which bores into the smaller branches and twigs. The axil of a bud or of a small branch is usually selected as the spot to begin operations, and from there the comparatively large open burrow extends downward and inward to the center of the branch. The injury itself is not significant, except that the branch may be so weakened that it readily breaks in a strong wind. Very little is known regarding this insect and its habits. The adult beetle, which does the injury, is one-half inch long, is nearly cylindrical and is brown in color. In California it is said to be partial to olive trees, but has also been reported as attacking the peach, apricot, almond, apple, pear and grape, and the grub or larva has been found boring in live oak and almond trees. In this state adult beetles in freshly made burrows in prune twigs were received at the experiment station in January.

Remedies: Unless this insect becomes much more injurious than it has been no means of preventing its attacks will be necessary. Should a remedy become necessary, it is probable that a spraying with lime, sulphur and salt, or with whale oil soap, at the time the attack begins would repel beetles from the trees. If paris green should also be added to either of these sprays it would probably poison any of the beetles that should attempt to eat into the twigs.

Tent Caterpillars (*Malacosoma* spp.). When these larvae are very numerous they can entirely strip a tree of its foliage in a very short time. When

first hatched from the eggs they are not readily noticed, but as they grow larger they are readily distinguished both by their size and by the tents which they build. These tents consist of numerous layers of closely woven silk, the threads of which are secreted from glands in the body of the insect. These various layers are probably formed by the larvae crawling over other larvae resting on top of the layers below. Toward the middle or latter part of summer these larvae become full grown and they then seek crevices, where they spin silken cocoons and then change to pupae. After remaining in this stage a short time they change to the adult insects or moths which come forth and deposit the eggs. The eggs are deposited in masses on the small branches or shoots, and in the case of one species where the eggs are laid on new shoots the egg mass completely surrounds the twig. These are covered with a cement-like substance which is impervious to water and climatic conditions. The gellatinous substance, besides acting as a protection to the eggs, is said to constitute the first food of the newly-hatched larvae. The embryonic larvae in these eggs are nearly full fledged at the beginning of winter and usually come forth from the egg mass early in the spring. All of the moths do not emerge



Tent Caterpillars Clustered on Trunk

at the same time, so that we may find them laying their eggs until late in the fall. The eggs of the late-appearing moths do not hatch until a correspondingly late period in the summer, therefore we may find some caterpillars and nests all through the summer. This might seem to indicate that there is more than one generation a season, but this is not the case, as there is but a single generation each season. The adult moths are about one inch long and are cream colored with indistinct white bands on the wings.



**Remedies:** In the prune orchard many of the clusters may be destroyed at the time of the winter pruning. In case this is not done and the caterpillars become abundant in spring a single spray of arsenate of lead, three pounds to fifty gallons water, will be perfectly efficient in destroying them, provided it be applied while the larvae are still young. As they increase in age and size they become more and more resistant to the action of the arsenicals, and

consequently spraying becomes less and less efficient. When only comparatively few colonies are scattered through the orchard these may be readily destroyed by either burning or crushing.

A considerable number of other species of insects work upon the prune, but they are of so little economic importance that they will not be considered at this time.

## Fertilization in Prune Orchards

By A. L. West, Salem, Oregon

I BEGAN to learn the value of fertilization for larger crops and better quality, by feeding the soil on my father's farm back in Indiana, when I was a boy. We raised corn, hogs and cattle. My father was a successful farmer and was looked to for advice by neighbors all around him. He worked on the line of rotation of crops, and when he had a field in corn about three years he would sow to wheat, then in the spring to clover and let it remain two or three years, then turn it under and plant to corn. He used wheat only to get his fields back to clover. Then he was very careful to save all the manure around the barns and haul it out over the thinnest and poorest places in his fields. After the clover he raised a good crop of corn and of fine quality. I appreciated the fact then that for good crops you must feed the soil.

After coming to Oregon and going into the prune raising business I soon realized that our orchards would have to be fertilized if we wanted good crops. I could see that the trees were starving and that the soil was not supplying their needs. The prunes were getting smaller and a great many unnatural or red ones on the trees that would not dry and had to be thrown away. I remember the first manure I hauled onto my orchard. I had some trees that were actually dying and I realized that it would not be many years before all the trees would be dead. So I covered the ground with a good heavy coat of manure. Some good prune men said, "West, you'll kill your trees by putting manure on the ground." I knew they would die anyway if I didn't, so it would do no harm. The next spring I turned it under and got a fair growth that summer. Then that winter I hauled a great deal more manure onto my orchard. The same men said I would surely kill my trees, but they soon realized that the manure had saved them. Some said "prune heavy so you won't have so much tree or so many prunes," which reminded me of the people in Indiana, who said "plant fewer grains in a hill and you will have larger ears of corn," which does help in a poor field.

But what to fertilize with—I had to learn that, for I knew we couldn't do the same with prunes as with corn. We couldn't sow to clover, for we have to plough the orchard every spring. I began by hauling manure in large quan-

tities onto my orchard. Then I sowed rye one year, but failed to get good results; then I heard of vetch and tried that. I learned that I could plant it in the fall and get a good crop to turn under by spring, so I sowed it after my prune harvest, but didn't get much of a crop; it was thin and short. Then I learned that the ground should be inoculated, so I thought perhaps the first crop would do this and sowed more vetch, but before the prunes began to drop, the last of August. By the time prune picking was over my vetch was up two or three inches and looked promising. By spring I had as fine a stand of vetch as you would see anywhere. I turned that under in May, and in the fall I repeated it again with even better results. Now all this time I was hauling manure onto the land. Since the third year I have sown only half of my orchard at a time—half of it one season and the other half the next season. This way I get a good crop of vetch every two years, that, with the manure I have handy, keeps my orchard in good condition. Last season my trees showed a wood growth of eight feet and my prunes were more than a size larger than my neighbors'

near me, and I had more to the acre.

Two years before, when orchards near me had one and one-quarter to one and one-half tons to the acre, my orchard had a ton to the acre. I will leave it to the reader to figure out the cause; it is very clear to my mind that the more vigorous your trees are the more able they are to hold the fruit in blooming time, also to hold the fruit after it is once set on the tree.

I have never used commercial fertilizer, and don't intend to as long as I can do without it unless I find some properties lacking in my soil that vetch and manure do not supply. Some suggest lime; I think lime is all right in low, wet places, but I find that to tile drain and manure well afterward is better. This brings up the subject of tile draining, which is very important to orchardists and farmers. But I will not go into that only to say when the soil is leached out by winter rains and snow, and remains wet until late spring, put in tile drains down at least three feet in the shallowest place, then cover the land with a good coat of manure and sow to vetch. My orchard is now sixteen years old. There is no reason why any orchard should run down on account of age, and it won't if the trees and soil are properly cared for. A practical prune man was through my orchard the other day and said that it was in much better condition than it was two years ago.

Almost the whole world knows of Hood River as a place that produces the best fruits, and all of Hood River Valley should know, and could know, that there is one place in Hood River, under the firm name of R. B. Bragg & Co., where the people can depend on getting most reliable dry goods, clothing, shoes and groceries at the most reasonable prices that are possible. Try it.



Splendid Type of Packing Table for Prunes





Italian Prune Orchard, Newberg, Oregon

## Protecting Prune Orchards from Frost by Smudging

By A. Sharples, Goshen, Oregon

**T**HE process of smudging that I have followed for many years with uniform and complete success depends entirely upon the liberation of latent heat from the invisible vapor of water and the condensation of that invisible vapor, thereby creating an artificial fog. I am one of those who believe that no man does anything well unless he knows why he does it, and to understand this you must know when and why certain conditions of the atmosphere produce frost and when and why other conditions retard and prevent it, which implies a thorough understanding of the theory of latent heat. To have frost the sky must be clear, little or no wind and the air relatively dry. All bodies are constantly radiating and at the same time absorbing heat. Now when radiation goes on faster than absorption the temperature falls, and if the air is sufficiently dry it falls to below 32 degrees and we have frost. When the dew point, as ascertained by a sling psychrometer, is 42 degrees or less we will have frost, and the lower the dew point the earlier will the frost occur and the more severe will it be. If, however, the dew point is below 32 degrees we will have freezing, but no visible frost until the temperature falls as low as the dew point, when the invisible moisture of

the air will be condensed and precipitated in the form of dew, which freezing will become visible as frost. This condition of things with a low dew point below 32 degrees produces what in common parlance is termed a "black frost." For those who may not understand it, I will state that the dew point is the temperature at which the invisible moisture in the air is condensed and precipitated in the shape of dew and depends entirely upon the relative saturation of the air. In this connection I will say that I regard it as important to have accurate and sensitive thermometers and a table of dew points, which can be obtained at the weather bureau at Washington, and I also think one is printed and for sale by one of the papers at Medford, Oregon. I have a sling psychrometer made by Henry J. Green at Brooklyn, New York, which is all that one could wish; it has a perforated brass plate guarding the bulbs. This can be had for \$5.50 with a dozen covers for the wet bulb; there is a table of dew points that accompanies it, but which is not satisfactory. I would advise getting one that shows it for every degree.

In an orchard of 45 to 50 acres I place along the south side twelve or fifteen fires made of good, dry two-foot body fir wood and as many loads of

wet manure. The fires are laid up with kindling ready to light and a little powdered resin put on the kindling. When you are ready to light throw a couple of ounces of coal oil on, which will make them burn quickly. Then put on the larger sticks of wood; three or four at a place is enough. My fires are about forty or fifty yards apart, and should be ten or fifteen yards away from the trees to the south. When they get burning well I cover them with the wet manure. The amount of water in the manure is the important thing—the more the better. You can't get the manure too wet as long as it doesn't drip and put your fires out. Cover these fires with the manure the same as you would a charcoal pit with dirt, being careful that no flame breaks out from the top or sides; if it should, stop it at once with the wet manure. I also put through the orchard at irregular intervals probably as many more fires to reinforce them. It has been my experience, and Professor O'Gara makes the same statement, that even if when the fires are first lighted the wind is not from the south, it always comes that way before morning.

If fire should break through the covering of manure it creates an upward current of air which is not desirable, for we want to keep this moist, warm



air close to the ground amongst the trees. The fog that in this way is produced is, in my experience, from twenty to forty feet high. Now if the difference in the reading of the dry and wet bulbs of the psychrometer is not more than 14 degrees the fog will at once form and float through the orchard. The greatest depression of the wet bulb I have ever seen in my locality was 16 degrees, and this only three times, as I remember, since about 1896 or 1897, but by persistence in keeping the fires well covered with wet manure after a while the fog commenced to form and entirely covered and protected the orchard. I have seen it stated that smudging did not raise the temperature in the orchard, but that, I think, is when it is attempted to protect the orchard with either a dry smoke or with but little moisture in your materials. Once, and once only, did I try this with thermometers, and when the temperature outside of the smudge was 28 degrees, inside the orchard at quite a distance from the fires, too far for any direct influence, it was 36 degrees. I have seen ice form one-eighth to one-quarter inch thick in pans filled with water outside of the smudge, whilst inside the orchard water dripped from the trees as if there had been a light rain. While I am satisfied that this manner of protecting orchards from spring frosts has its limitation, I don't know what it is, but I am sure its scope of usefulness is much greater than I have ever met with. I doubt if it is necessary to have a fog, although I would rather have it, and in my location I have never failed. I think if the atmosphere was charged with moisture sufficient to raise the dew point above 42 degrees that even if there were no fog there would be no frost.

It may be objected that the surrounding air being dry would absorb all this moisture and prevent a material raising of the dew point, but we see that the evaporation from streams is condensed and produces fogs along their course, so that in the early morning hours one on an eminence can tell the course of a stream by the fog. Large rivers and lakes are said to modify the climate and prevent frosts in their vicinity even without the formation of fogs. Now there is a reason for this, and I conceive that the explanation is that the invisible vapor from their surface charges the air so as to raise the dew point above the point where frost occurs. This is simply an idea of my own; I have never demonstrated it. I think that in Eastern Oregon and Washington, which is a much drier climate than ours, if they would use more of these fires to a given area than we do here, keeping plenty of water on them, they would produce the same results that we get here.

It does not cost me more than twelve to fifteen cents an acre a night to protect my orchard, but I have my own wood, haul it with my own teams and haul my own manure; my expenses, therefore, are light. I think where

material is scarce and expensive, by driving four stout stakes in the ground, having some heavy wire netting or closely woven wire fencing fastened by the corners to these stakes, covering it with hay that has been thoroughly soaked in water for several days, with an oil pot burning crude oil underneath and a barrel of water to pour on the hay as it gets dry and keeping it up until sunrise, the same result would be obtained as I have invariably had. I am a good deal interested in this matter, for my son has a seventy-acre orchard on the Columbia River at Patterson, and at Umatilla they have frosts every April, according to the United States Weather Bureau. As to the manner and time to determine the dew point accurately with a sling psychrometer, the sky overhead must be clear, neither cloudy or hazy, and about one hour before sundown, in my experience, is the best time, although it can be done any time after four o'clock in the afternoon.

I am a great believer in the prune grown in Western Oregon and Washington, both French and Italian. Some years ago I sent samples of some French prunes (Clairac Mammoth) to a large Eastern firm; they pronounced them the best flavored and finest French prunes that were ever in their market; the only fault that they found was that the skin was tough, which, I think, is caused by the large amount of nitrogen in the soil, as was suggested to me by Professor Cordley. Unfortunately for our prunes, we often have wet weather at the time of ripening, and that prevents the formation of sugar, and with the sweet French and Silver prunes promotes brown rot. This was abundantly demonstrated last year. We don't dry our Italian prunes enough; the growers want to get more grade and weight and leave too much moisture in them. I try to finish mine with a temperature of about 200 degrees, but the air must keep moving rapidly. A prune would make a nicer product if all the time it could be kept in dry, warm air, gradually raising the temperature from about 115 degrees to 120 degrees up, as the curing process proceeds until it is finished, and use lots of air. I use about 6,000 inches with a forty-foot draft. While this is entirely practical it is more troublesome and expensive than the ordinary way with a tunnel drier. The trouble with most driers is in the furnaces; they are incapable of producing the best results. They are mostly iron stoves or their equivalent. They will do to dry hops, but hop drying and prune drying are different things. A proper furnace, to get the full benefit of the fuel, should be made of brick with a heavy iron top not less than eight feet long, lined with fire brick, a combustion chamber and smoke burner with grate and water pans under the grates and an abundance of iron pipe to radiate the heat. A furnace of this kind can be constructed, exclusive of the pipe, for about \$150, but it pays. The best fuel we have here

is well seasoned body fir. A number of instances have come to my notice of poorly cured fruit being rejected by the buyers in the East and last year one in Tacoma. Nothing will ruin what should be a great and prosperous industry sooner and more effectively than such a condition, and packers should mercilessly reject badly cured fruit.

It used to be the complaint in Western Oregon and Washington that Italian prunes were unreliable bearers. I have some trees that always bear good crops; I am making some experiments to see if the whole orchard cannot be made to bear good crops, and I think I shall succeed. A French prune does not need so much heat to cure it well as an Italian; it has more sugar in it. 170 degrees Fahrenheit, I find, makes a good prune at the finish of the process. A word more on other fruit products of Western Oregon and Washington. Their quality is unsurpassed, but as a rule they don't bear shipping well in the fresh state, but must be dried or canned. Our berry industry ought and will, with intelligent management, assume enormous proportions. The pure food laws will help us greatly in the making of fruit syrups and preserves; it was a calamity to the nation that Dr. Wiley was virtually forced by his self-respect to resign his position; he was courteous, kindly and exceedingly anxious to help any who applied to him for information. I have had a personal experience of his goodness.

The highest types of apple in the world today are the Hood River Spitzenberg and Yellow Newtown Pippin; the highest type today to Hood River's cosmopolitan people of a life insurance policy is a Policy of the National Life Insurance Company of the United States of America, of Chicago.

These Policies, which hundreds of your neighbors have, make superb Christmas presents, Happy New Year gifts, appropriate wedding presents, choice birthday reminders and unexcelled anniversary tokens.

Write for information to the Agent at Large, Dr. James H. Shults, Hood River, whom most of you know, quote "Better Fruit," and full and satisfactory information will be furnished and hurry orders will receive prompt attention by telegraph and special delivery letters.

#### *Editor Better Fruit:*

I desire to state that I am surprised at the wide circulation of "Better Fruit," as shown by letters of inquiry that we have received from all over the world as a direct result of our advertisement of the Caterpillar in your paper. We received in almost the same mail this last week a letter of inquiry from a large land holder in Matakana, Auckland, New Zealand, and another from a very large nursery firm in Canterbury, England. I might also add that we have just received a letter from Mr. G. E. Browne, proprietor of the Spokane Apple Orchards, telling us of the success he is having in using an orchard Caterpillar traction engine in his undertaking. This Caterpillar has been in operation in his orchard for over two months and he usually gets from 70 to 75 acres a day at a cost of 16 cents an acre. The Caterpillar easily covers 700 acres of the tract in ten days. Mr. Browne expects to cover 8,000 acres in this tract with the Caterpillar before the end of the season. Yours very truly, The Holt Manufacturing Company, by J. W. Hill, Agent.



# A Short Talk to the Beginners in the Culture of Prunes

By F. C. Bradford, Horticultural Department, Oregon Agricultural College

THE Northwest is known throughout the country as the home of the "Big red apple"; Northwestern pears are famous in many markets, Northwestern strawberries reach numerous cities, many pens tell of the loganberry, the walnut, the peach as being grown in the Northwest, but little printer's ink has been used on the Northwest prune. Yet all the time the prune has been going quietly along winning a place in the markets of the country and bringing in a monetary return exceeded only by the apple among horticultural crops. The reason for this lack of advertising is not in the province of this article. From an enterprise bringing at one time rather scanty returns, prune growing has developed into an industry yielding steady and ample returns. It is a rather conservative business; it does not show the wonderful yields per acre recorded in some apple and pear orchards, yet the yields are more steady and in the average orchard, with the average man for a long term of years, prunes will prove as profitable as any of the other orchard crops. The relative simplicity of the orchard operations makes prune growing inviting to the beginner in fruit culture. In fact the comparative ease with which a fair crop of prunes can be raised has tended to keep the industry in a rather backward condition. The comparatively small damage from insect and fungus pests, the lessened dependence on pruning and the fair certainty of some yield even from a neglected orchard have kept in the business many shiftless growers who should have been forced out. The San Jose scale did a vast amount of good when it compelled growers to give care to their orchards, to abandon drifting and either to sink or to swim.

Some people, with the memory of the lean years in prunes still strong, decry the present "revival," predicting overproduction, starvation prices and dire disaster. These pessimists probably fail to consider that many of the causes formerly operating to make low prices have now been removed. In those past days large amounts of Italian prunes were dumped upon markets accustomed to the smaller, sweeter California prune. This attempt to dispose of a new product was as difficult of accomplishment as was that of the man who on a wager tried to sell a perfectly good silver dollar for fifty cents and failed. The market had to be created or else the product sold as California fruit. Furthermore, the drying of prunes was in a far less settled state than it is now; the average dryers were rather crude and men experienced in drying were few. This state of affairs resulted in a lack of uniformity in the product. In addition to this the prunes were marketed in sacks and not processed. Today these conditions are different. The markets

like the Italian prune; the fruit comes from the grower in a better state and the processing makes for uniformity and the attractive packing makes for appearance. There is still room for improvement, but the present state of the industry warrants good expectations for the future and offers good returns now.

Prune planting has been very active in the past few years, with the Willamette Valley leading. The future outlook is for centralization of the industry in this region as far as dried prunes are concerned. The man intending to grow prunes commercially asks first where he shall locate. He soon finds there is considerable difference of opinion as to whether hill lands or valley lands are best for prunes. The truth of the matter is that either hill or valley orchards will produce good fruit, provided the soil has depth and is well drained. The prune does well on a great variety of soils, but reaches its best development on the silty bottom lands and on the red hill soils. It will not do as well on very heavy soils as the pear, nor will it do as well on the lighter soils as the peach, but in general it is safe to say that proper depth and proper drainage are more important than the exact texture or chemical composition of the soil.

As to whether he shall locate near town or farther out on cheaper land each man must decide for himself. It is a good idea to locate near other prune growers; there is benefit in touching elbows with men having the same interests, exchanging experiences and opinions with them, and the prices for fruit are usually somewhat better where there are a number selling. There is less advantage to the prune grower in being located close to the railroad than there is to the grower of other fruits, for his crop is marketed in a somewhat concentrated form and suffers less from a long haul over rough roads. The social advantages of being

close to a town with its schools, churches, and so on, are not to be discounted, it is true; this is the part of the equation that each man must decide for himself. There are profitable orchards within city limits and there are profitable orchards some few miles from the railroad.

Many people of a timid or far-sighted nature, whichever one wishes to call it, dislike to put all their reliance in one crop, and naturally want to know what their best side lines will be. Unfortunately it is impossible to give any formula to fit all cases. Market gardening will pay well in some locations, but would be a very unwise venture in others. Stock raising would be profitable to prune growers in some localities but of doubtful wisdom on high-priced land. And so it goes. Each man must decide according to his locality, his farm and his aptitude. Loganberries make a very good crop in conjunction with prunes, as they are handled when work in the orchard is rather light and the prune drier may profitably be employed in drying the loganberries, thus serving a double purpose. Prunes are now being planted frequently as fillers in walnut orchards. Hops will, in the long run, prove rather difficult to handle in conjunction with prunes. In many seasons the prunes will begin to ripen before the hops are out of the way. In such times there is hurry, distraction and loss on both ends.

The question of varieties has been pretty well tried out in the orchards of Oregon. The testimony of experience is strongly in favor of the Italian, or Fellenberg. This variety is not ideal; it has a tendency toward bearing in alternate years; it is somewhat susceptible to hot weather and ripens a little later than we should like. On the other hand, the fruit makes good size and dries well; the tree is for the most part vigorous and hardy. All things considered, the Italian prune is by far



Young Prune Orchard near Salem, Oregon





Prune Orchard near Newberg, Oregon

the best we now have, and very few of any other variety are being planted. The Petite or French prune was formerly extensively planted; in fact the old recommendation was for one-third Petites in every prune orchard. There are still some who favor it, especially in Southern Oregon, but the general tendency is away from this variety. Many orchards in the state contain blocks of Petities that have been top-worked to Italian and the more recent plantings are almost entirely of Italians. The chief objection to the Petite is its lack of size; there is no natural thinning of the fruit, which fact still further reduces the naturally small size. Furthermore, Petites from the Northwest compete in the markets with the California Petities, while the Northwest virtually has a monopoly on the Italian.

Other varieties have been tried, and for the most part found wanting. The Silver, when properly dried, commands a very high price because of its attractive appearance, fine quality and great size, but it is a very difficult prune to dry properly and it ripens too late. The Sugar prune has been rather widely tried, but cannot be recommended on account of the tenderness of the tree and its susceptibility to various diseases, in addition to its habit of over-bearing while young, thus permanently lessening its vitality. The Tragedy, though an excellent fruit for marketing in a fresh condition, is not a good drying prune, as it makes a dull, lusterless gray product. The so-called Hungarian prune is in reality not a prune at all and should not be so considered. The "prune," in its name, came over from the French language, in which "prune" means "plum," and the variety should be classed as plum. There are some other varieties that have been brought forward at various times, but none of them have been widely enough tested to warrant general recommendations. In short, then, the prospective grower should plant largely of Italians; a few Petities will do well, as they ripen first and can be used to keep the pickers busy while organization of the harvesting work is

completed. If the grower wishes to experiment he can try a few of the Willamette, Pacific, Columbia, Tennant or Umpqua, but these plantings should be considered only as experimental and should not be relied on as commercial propositions.

The smaller orchards are naturally the most numerous, but these are almost invariably only a part of the revenue producing scheme of a farm, the rest of the income being derived from other crops, either horticultural or otherwise. The general tendency where prunes are relied on for the whole income, or for the largest part of it, is toward an increased acreage; many orchards now under one management were originally composed of several independently owned tracts. Fifteen to twenty-five acres is about the best size for a "one-man orchard." A place of this size will provide a very comfortable living. One man can do most of the work in such an orchard; he will need some help in the spraying, pruning and in handling the crop, but hired labor with prunes is probably a smaller item than with any other fruit. Though there are countless small

orchards paying handsome returns, it hardly seems advisable to plant prunes unless one will have enough to warrant the erection and maintenance of a drier. The small grower, being forced to rely on commercial driers, frequently finds these crowded and suffers loss while his fruit is waiting its turn. Furthermore, he is sometimes compelled to pay rather heavy prices for getting his prunes dried. In seasons when the fruit ripens quickly every drier is full to its capacity and nobody wants to bother with a small amount of fruit on a moderate charge.

The establishment of a young orchard is very much the same with prunes as it would be with other fruits. The tendency to guard against is the crowding of too many trees on an acre. A large part of the older orchards were planted with the trees eighteen feet apart; these orchards now show that twenty or twenty-two feet would be preferable. The chief enemies to be fought in the earlier years are the sunscald, borers and aphids. None of these are insurmountable difficulties, but care will not be wasted. The trees should bear some fruit at four years, but cannot be counted on until they are six or seven years old. The limit of profitable bearing is still an open question; some trees have borne well for over thirty years. This article has mentioned some of the difficulties; these are not to be denied, but they can be and are being overcome. They are less than those confronting growers of other fruits; the returns are rarely wonderful, but to the man who will work conscientiously and intelligently they will be ample.

#### *Editor Better Fruit:*

It gives me great pleasure to be able to send in the subscription of a friend and neighbor. It is hard to see how anyone in the fruit raising business can get along without your most excellent magazine. Wishing you abundant success, very truly yours, Fred Reichenbach, Wonder, Oregon.

#### *Editor Better Fruit:*

I take great pleasure in enclosing my check for \$1.00 in renewal of my subscription for "Better Fruit" for another year. I cannot refrain from complimenting you upon the very nice paper you publish. Yours very truly, H. Van Vleck, St. Paul, Minnesota.



Prunes as Fillers in a Walnut Orchard





A Silver Prune Tree, Yakima Valley, Washington  
Note the size as compared with the silver dollars held up by the men

## Prune Culture in the Yakima District

By C. G. Ware, North Yakima, Washington

**P**RUNE culture seems to be of increasing interest—not because of the prune of the dear old boarding house memory, but because of the green fruit. There was a time when Yakima growers thought they were going to make fortunes by evaporated prunes, but the market price so discouraged them that many acres of prunes were taken out and other fruit substituted. However, since the attention of the growers was directed to the green fruit side of it and emphasis was put upon the marketing of them in this condition, prunes immediately sprung into favor. It is now looked upon by many growers as an ideal crop to raise. In the first place the trees are easily taken care of, there being less expense in pruning and thinning of the fruit, though picking time, when it comes, comes with a rush. They are easily handled and stand up well for long distances in transportation, many carloads of prunes last year going from the Yakima Valley to the Atlantic seaboard.

At present there are in the valley about 175 acres of prunes. Conservative estimates on the crop production this year are for 150 carloads of prunes, 1,000 crates to the car, averag-

ing, you will note, slightly under a car to the acre. Of this number I should say 125 cars would be Italian, the balance being divided fairly equally between Silver, Hungarian and French. M. E. Olson, who has 45 acres in prunes and expects to ship about that number of carloads, last year averaged eighty-five cents per crate. The earlier fruit

on the market, however, sold for as high as one dollar per crate.

A feature of the prune industry in the Yakima Valley has been the interesting visit of the red spider in large numbers. At first it was not viewed with alarm, but it was soon discovered that where the red spider began to do business he rapidly devitalized the tree, and it seems as though the prune tree was a favorite habitat of his. However, they have been eliminated this year by such men as M. E. Olson, who has used two forms of weapon, both being effective. The first form was powdered sulphur, put on with a power blower, which was very effective while it lasted, but the precipitation in the valley this spring has been unusually heavy and in some cases the powdered sulphur did not last very long. Then a spray was made and the sulphur was melted and dissolved, and this was used on the trees with the most gratifying results. The third day after the application a number of us searched for nearly thirty minutes before finding a single sample of the enemy. Conditions in the valley look exceptionally well for prunes, the fruit being larger at this season than ever before and market indications are that prunes this year will net as much money to the grower as any other fruit.

## 50,000 Crates of Italian Prunes

The two railroads running through the Zillah-Springdale and Parker districts are preparing for the forthcoming rush of fruit, shipments of which will commence to start throughout the above districts next week. The well-known County Commissioner Olsen's ranch expects to market fifty carloads of Italian prunes from his orchard on the old Purdy Flint place on Parker bench. This compares with ten carloads last year and thirty carloads the year before. His pear and apple crops also will be heavy. His orchard area of these several varieties comprises over 15,000 trees. Upward of 200 people will be needed to help pick and pack the above crop.—Zillah Free Press.



Packing Prunes, Olson's Ranch. Olson Fruit Company, Toppenish, Yakima Valley, Washington





Stinson & Hensil Prune Orchard on the River Road, near Eugene. Next to apples, prunes represent the largest acreage in this section

## Tunnel Drying of Prunes Simple and Economical

By K. B. Kugel, Dallas, Oregon

THE prune grower who is about to construct a drier for the relief of his heavy-laden trees naturally brings up many questions as to this or that style of drier and its advantages. Having had some experience in tunnel drying, I shall endeavor to assist the man in question with some facts concerning this method, for it is undoubtedly the simplest, best and most economical method we have been able to see in operation.

The two principal questions confronting the grower at this time are the quantity of fruit handled or daily capacity and cost of operation. As the fruit begins to color and ripen and the picking commences he realizes that the "rush" season is on, and that he must push everything to the utmost if he is going to save his crops before the fall rains set in. Here is the point, push! The whole secret of drying is to push everything to its capacity, and above all to keep every empty space in the tunnels filled with a full tray of green fruit. It doesn't make any difference what kind of a dryer he has, for it takes a certain amount of heat to dry a bushel of prunes, and if he has empty spaces here and there in his drier he not only loses a large amount of heat, which would otherwise be utilized before escaping, but he holds back his season materially.

There are many variations in tunnel drying, as steam heat fans for driving the hot air through the tunnels, etc., but we have the simplest and most economical system. Although our drier is unusual in size, having twenty tunnels, yet it will dry just as satisfactorily with two or more. Our tunnels are about forty-five feet long, or twelve trays long and twelve high, with an extra space of six trays over the heat opening called the finisher. A tray holds half a bushel of green fruit. This gives a capacity of about seventy-five bushels. Each tunnel has its own walls of ceiling and studding on edge between every foot. This gives a dead air chamber between them which helps greatly in keeping the temperature up. It is essential that the outside walls have this double construction, otherwise the fruit in the tunnels dry on the inside of the tray and cause delay in handling because of the extra turning and picking. The floor and roof of the tunnels are double ceiled with building paper between. The tunnels have a slant of about twenty-four inches, but we would advise raising another six inches, making the trays slide much easier. Instead of having the trays slide on wooden strips we use common white insulators, such as are used on telephone poles. These are fastened into the upright studding with twenty-

penny nails, and they give very satisfactory service. Of course they must be properly spaced and lined.

The ventilator shaft is about thirty feet high and is regulated by means of two slides which completely close each tunnel if necessary, thus shutting off all draft. The doors at this end of the tunnels are of one piece and slide up, while those at the lower end are divided, one part sliding up, thus giving the drier man an opportunity of examining the fruit without the escape of too much heat, while the lower part is hinged to the floor. When a tunnel is open to take out the fruit a tin slides over the heat opening, which is about the size of a tray, completely shutting it and forcing the heat into the other tunnels, which would otherwise be wasted. The walls of the fire room are of cement construction, giving a solid foundation for the tunnels above. The height in the clear is about twelve feet and the width ten feet, just enough for the six-foot hop stove and the necessary collar and pipe. We use an extra amount of pipe called a coil, giving additional draft for the fires and a greater heat radiation. The opening in the wall around the hop stove is about six inches larger each way; this with a manhole two feet square in the opposite wall back of each stove gives the necessary amount of fresh air to be



heated as it rises to the tunnels above. Ventilation is essential for drying, and we certainly have a splendid draft through the tunnels. The heat is held as near as possible between 190 and 200 degrees. This is a good drying heat and gives a splendid finish to the fruit. This may seem high, but we very seldom have a tray of burnt fruit.

Now let us turn our attention to the green fruit, as we have been dealing with the drying. There is no confusion in working, as the green and dried fruit are at opposite ends of the drier. The fruit is unloaded onto four-wheeled trucks, or rather wagons, holding up to twenty-five bushels, weighed and hauled to the grader. There the fruit is dumped into a hopper, which feeds with an endless rubber conveyor belt about six inches wide, with conveyor of wooden strips ten inches apart. A stream of water washes the fruit as it passes up this to the grader proper, consisting of four hard rollers six feet long, each two turning toward each other. These rollers are adjustable, having a small space at the upper end and a larger one at the lower end, so that a medium-sized prune will fall through. To give them a rapid carrying power they are bound spirally with one-quarter inch copper wire and with a slight incline. The prunes pass from the conveyor onto these rollers and are graded, for the medium and the small pass through the adjustable space, while large prunes pass out at the end onto trays ready to receive them. A boy on each side spreads the fruit, and from there it is carried to the tunnels,

if empty spaces permit; if not they are piled on trucks and put in later.

We don't dip our fruit, as some do, and it dries just as well and comes out in the best possible shape. As it is tumbled back and forth through the grader all leaves, stems and dirt are left behind. The graded fruit is kept as near as possible in separate tunnels, so that it will come out more uniform in size. A crew of five runs the grader—one boy who has charge of the empty trays, two spreaders, two carriers and one at the hopper. This crew will run through from 800 to 1,000 bushels daily if necessary; however the daily capacity is about 800 bushels. This same crew also works in back sorting. The power for the grader is a one and a half horse-power gasoline engine, but it was turned by hand for a number of years. The grader will work equally as well for a small drier and with half the crew. Petites are handled just as well as Italian prunes. There are two kinds of trays used at present, the wire tray, which is reversible, and the wooden slat tray. They claim that those who spread under water can get more fruit on the wire tray, but we have found the wooden tray the best. The little slats are occasionally broken, but they are quickly and easily repaired, and the trays are lighter and can be spread a great deal better than the wire trays with our method.

Now as to cost of operation. Is it necessary to dry prunes by an expensive method when a simple method will dry the same quality of prunes and at half the price of the expensive

method? Then it must naturally be a better method, and we believe it is. We are not advertising, as we have nothing to sell. To the grower who has cherries as well as prunes the drier will be valuable. Some years there will be a slump in the market and the local cannery will pay but a small price, then he will have to look to the drier to save his crop. By using wire trays and an improved pitter, now on the market, he dries his fruit to perfection with this style drier, for we have proved it. As his crops increase the drier can easily be increased in capacity by the addition of more tunnels.

[A Plea for the Oregon Italian Prune (or is it the California blue plum?).—Why is it that everything that comes from the "West" has the words "Grown in California" attached to it? Mr. Prune Grower, you have undoubtedly seen car after car of fancy pack Italian prunes shipped east to the various markets, and what do you believe they are sold to the public for? Not Italian prunes at all, but "Delicious California Blue Plums," at so much a pound. Don't we of the Northwest think that California has had enough free advertising at our expense? Then let us ask that all shippers stamp the words "Oregon Italian Prunes" on all crates and boxes. Mr. Cherry Grower, California has stolen your advertising in the same way. Hundreds of barrels of Royal Ann cherries are shipped there and processed and shipped to the world as "California grown Marachino cherries." Let us demand our rights in the Oregon grown product.—K. B. K.]

## Planting and Care of Prune Orchard Up to Bearing Age

By George S. Zimmerman, Yamhill, Oregon

**T**HE first essentials to be considered in growing a prune orchard are deep, fertile soil, good water drainage, good air drainage and good nursery stock, and then with proper planting and care there is no reason why success should not crown the fruit of your labor. After a suitable location has been found the first thing to be considered is getting the land ready for planting. Plow well and deeply, say ten inches, and if the land has been previously farmed use the sub-soiler in connection with the plowing so as to break up the hardpan, for it cannot be done after the trees are planted except at great damage to the rooting system.

There has been a great deal said in regard to the different systems of setting out orchards, but considering all in all I prefer the square system, for the orchard is easier cultivated—that is, there are less rows to contend with and easier to get around with a team and wagon when it comes to gathering the fruit. The method which I prefer in orchard staking is by running control lines two to three hundred feet apart and staking with a wire between these lines. To get the best results control lines should be run with an instrument. If the planting is to be

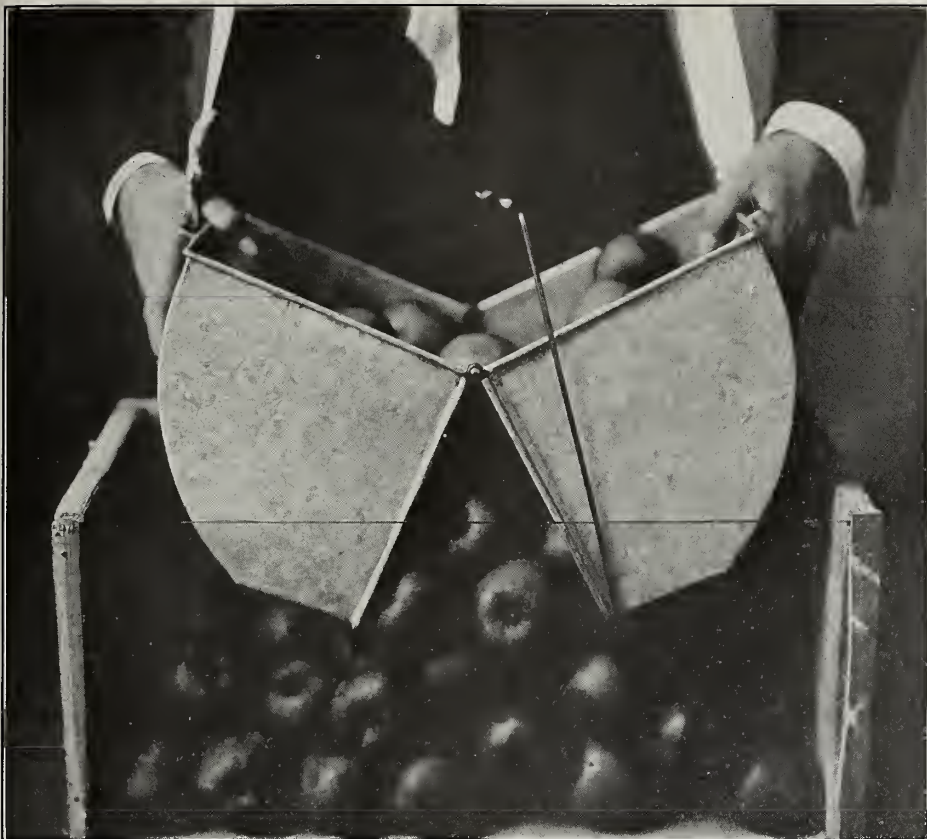
very large establish a base line through the planting and from this control lines are run at right angles. In staking it is very important that the wire should be kept as nearly level as possible to give accurate results. On uneven ground it is necessary to drop a plumb-bob from the wire to the ground to locate the place of the stake. Rubber tape is used to indicate on the wire the distance apart the trees are to be set. When I set out my orchard I set the trees twenty-two feet apart or 96 trees to the acre, but if I were to set out another orchard I would set the trees at least twenty-five feet apart. This may seem a waste of land to the new beginner, but as the orchard grows older one will readily see the need for putting the trees this far apart. In my orchard, at six years of age, I found roots of trees of the opposite side of the row overlapping.

The selection of the nursery stock is a very important factor toward success. Select one-year-old trees with good, clean roots and plenty of them, and a straight top from four to six feet high. If you are not a judge of trees go to a reliable nurseryman, one who will stand back of his stock. Do not get your trees too early in the fall, for some of the nurserymen start to dig

before the wood is mature, and the result is that the tree will sour and die, a loss in time and money. As soon as you get your stock from the nursery heel in in good shape to prevent drying out or injury from frost, for it must be remembered that the small rootlets are very sensitive to cold or lack of moisture. When you are planting keep a damp sack over the roots of the trees you are packing along, as this will guard against any injury.

Planting may be done at any time after the trees are dug in the fall until the buds show signs of activity in the spring, but at no time when the ground is wet enough to puddle or to pack around the roots. I prefer the early winter planting, as the soil has a chance to settle before spring. Before planting take a sharp knife and cut off the bruised ends of the roots where they have been cut when taken up from the nursery. This will insure the bruised roots to heal over readily and be less liable to disease infection. When you are ready for planting take the planting board (which is made by taking a one-inch by four-inch piece four feet long, cutting a notch in each end and one in the center), place it so that the stake which indicates where the tree is to be set will be in the notch





The Start. The Palmer Bucket is manufactured by the Palmer Bucket Company, Hood River, Oregon, from whom particulars and prices can be obtained on request. It is for the purpose of eliminating bruising and reducing the cost of transferring fruit from the picking receptacle to the field box

in the center of the board and then place a stake in each notch at the ends. Remove the board and the center stake and you are ready to dig the hole. When planting dig a hole deep enough so that when the top of the longest root going downward rests on the bottom of the hole; the tree will rest two or three inches deeper than it did in the nursery. Very great care should be taken so that the soil is well worked between the roots and that every root goes out naturally from the tree stock. If this is not done and the soil is thrown into the hole carelessly the roots will all be crowded together, which is very undesirable. After the tree is planted head back to about three feet and four inches, and then with proper pruning in later years the tree will be kept up so that cultivation will be done without great difficulty.

One of the greatest factors that has to do with moulding out the prune orchard is the cultivation given up to the bearing age. I practice clean cultivation and think that it should be the only kind of cultivation that should be practiced in any orchard, especially during its formative period. I will give here the method that I use here in the Willamette Valley. In different sections of the state it will vary somewhat. Plow as early in the spring as can be done without injury to the physical condition of the soil. I use the heavy harrow, disc and roller if necessary in the earlier part of the season, say May 1 or 10. The soil should be thoroughly worked down by this time so as

to prevent too rapid drying out. After this I use the Kimball light harrow or other light tool. These lighter tools are used to break capillarity and to form a dust mulch to retain the soil moisture. I use these tools up to about July 1; after this time we have very little rain to settle the soil and start capillary action and to start the weeds. Give your orchard a good start by thorough cultivation the first years of its life and you will have a healthier orchard, for I have found by practical experience that it is always the weaker trees that succumb to disease. There will be less resetting and your orchard will bear at least one year earlier.

Pruning may be done at any time after the leaves have fallen until the tree shows signs of activity in the spring. There are a great many different opinions as to the method of pruning a prune orchard, and they may all lead to a reasonable degree of success, but the following is a model that I have pictured in my mind and toward which I am constantly working. The object of pruning is, first, to mould the young trees as they grow into a uniform shape so as to produce the maximum amount of fruit without injury to the tree; second, for the size of the fruit; third, so that cultivation can be done without great injury to lower branches and with a reasonable degree of comfort. It is the tendency of the prune tree to gradually droop down a little from year to year after it starts bearing. As previously stated, top the tree at three feet four inches. The first year the

trees are planted every bud along the stem has a tendency to shoot out, they should all be stripped down with the exception of the three top buds. Leave these to mature; they will give you the foundation from which to start. After the close of the first year the three branches that were left to mature should be topped back to four or five inches, according to the vigor of the tree, but always leaving the bud at the end of the limb on top and on the inner side so that when this develops into a limb the tendency will be upward and inward. In later years when the tree begins to produce heavily this will act as a brace to keep it from spreading too much. At the close of the second year prune off all except the one shoot going upward on each of the three branches left the previous year. Prune these back to six or eight inches. This may seem a waste of time and tree energy, but it must be remembered now that we are laying the foundation for a prune tree to bear heavily in after years. The third year two branches may be left at the end of each of the three previously mentioned. Prune these back to about sixteen inches. This will give you at the close of the third year a tree with six main body branches. I will say here that most generally there will be one or two of these that will not develop, so in reality we have a tree of four or five body branches. The next year two or three may be allowed, but cutting them back to twenty or twenty-four inches according to the vigor of the tree. At the close of the fourth year the body of the tree is formed, and from that time on my object for pruning is to thin out whenever the branches seem to be too thick or crossing each other, or thinning for the size of the fruit. The fifth year the tree should begin to bear a paying crop.

Fertilization of the Young Prune Orchard.—This may seem a waste of time and energy to some, but let me tell you it is one of the greatest problems facing the prune grower today. Our prune orchards, like our grain fields, will gradually produce less from year to year if they are not fertilized. It is unreasonable to think that an orchard will produce from one to two hundred boxes of fruit year after year and not impoverish the soil. The best time to begin to fertilize is when the orchard is young, before it suffers from the lack of proper nourishment. One of the best fertilizers that I know, and one that not only furnishes nitrogen but potassium and phosphorous as well, is barnyard manure. The first year put two to three tons per acre and increase this at the rate of one ton per year, and when your orchard is six or eight years old you need not worry over its fertility. The first and second years the manure should be placed about two feet from the base of the tree. This will help to keep in the moisture. After this it should be scattered out evenly over the ground and worked in with a disc or harrow. The next best method for fertilizing the



orchard is to plow down a good heavy crop of green manure. For green manure sow vetch the last of August or first of September. This will assure a good growth in the fall, and turn under not later than April fifteenth. I say April fifteenth, for if the growth is very heavy and turned under at a later date there may be trouble in the soil drying out. If your orchard is large and you have not sufficient manure to cover the entire orchard each year, cover a section of it each year and plow down green manure on part.

**Drainage for the Young Orchard.**—The drainage that I prefer for a prune orchard is good, deep, natural drainage. I mean by this a soil where water never stands and where the water table is from ten to twelve feet below the surface. In the valley here it is almost impossible to get a very large acreage but that some portions of it will need tile drainage. The proper time to put in drains is before the trees are set. This will allow the soil to sweeten before the trees are set, and after the

trees are set they can send their roots down deep where they will have greater pasturage and greater resistance. I would recommend that nothing less than four-inch tile be used and that they be put down three and a half to four feet. The idea of putting in nothing less than four-inch tile is to allow a better circulation of air through these mains.

In conclusion I will say that in taking care of a prune orchard there are problems to meet and overcome. There cannot be any set rules to follow because of the variation in the climatic conditions from year to year, the variation in the soil in different orchards, as, for instance, the cultivation of an orchard where the soil is of a sandy loam nature would not do at all for an orchard where the soil was of a heavy clay nature. By using good, sound judgment mixed with plenty of reasoning power, and then by watching someone who has made a success of growing an orchard, there is no reason why one should not succeed.

ference in the price of evaporated prunes later in the year.

One peculiar thing about the prune crops of the Walla Walla Valley is the fact that the bulk of the people have no idea that prunes are grown in any quantity here. Fruit talk has always been apples, berries, cherries, peaches, etc., and one who is not a fruit man would be surprised to learn of the real amount of the prune business done each year. Prunes are Walla Walla's old standby and have always been profitable. Of course, they are a joke on many a dining table, but there are places where they are a godsend and where it would be almost impossible to get along without. Again, in Eastern markets and in other places where they are not grown in any quantity the prunes from Walla Walla have been known to have been considered luscious fruits for eating purposes early in the year like cherries. There is too much other fruit on local markets, however, for the prune to be in demand in the Northwest. However unknown, or rather unpopular, the prune may be among Northwestern people as a luxury, it is still popular with the fruit-grower, for every year sees more acreage set out, and there has never yet been a lack of market for Walla Walla prunes. This being true, fruit men are beginning to pay more attention to this branch of the fruit industry, and the people should give the prune more credit than it has ever received in the Northwest.

## The Prune Industry in Walla Walla Valley

By W. C. Garfield, Walla Walla, Washington

THE prune in the Walla Walla Valley, like hard-tack in the old-time sailing vessel, represents a staple product of the fruit industry, without which the cry of the commission men would be almost as woeful as the tale of the "Ancient Mariner," and with which in abundance, Walla Walla fruit-growers are reaping handsome profits yearly. Fruits may come and fruits may grow, but prunes grow on forever. This is the feeling of Walla Walla's experienced fruit men toward the prune, although the word itself is almost a joke in the minds of many people. A recent gormandizing contest of considerable notoriety in Southern California was lost by three stewed prunes. They were Walla Walla prunes and, like all good prunes should, looked too formidable and exhaled too fragrant an odor to the stuffed human specie, who lost his wager whispering to his attendant: "If I die, bury me in the land where those prunes came from."

Walla Walla prunes are now of world-wide fame. From the very infancy of the fruit industry in that favored spot of the Northwest prunes have always been recognized as a money maker, and while the hue and cry is for apples there are hundreds of acres of young trees not yet in bearing and as many more being set out this year. Two years ago there were ninety-seven carloads of Walla Walla prunes shipped to the New York market, where they were received with eagerness by the commission houses, and now there is an ever increasing demand for Walla Walla prunes in Eastern centers. Old-timers in the fruit business in Walla Walla hesitate to quit growing prunes a good deal like the big wheat farmers who hesitate to plant fruit trees on their lands. There is always a good demand for the

prune and the prices always realize a goodly profit. The trees are more easily taken care of than the majority of fruits and the fruit itself is most easy to handle. This is the sensible reason why there are something like 1,600 acres of prune trees in the Walla Walla Valley, probably about 400 or 500 more acres now coming into bearing and several hundred more being set out.

Conservative figures as to Walla Walla's prune crop this year estimate it to be 350 carloads. Of these the Milton-Freewater district will ship out 200 carloads, the Blalock orchard tracts will market 80 carloads and the remainder, grown near the city, will be handled by Walla Walla produce houses. This will be a larger crop than two years ago, when Walla Walla made a record and attained fame in New York. Last year the prune crop was not nearly as large in comparison, but this has been an unusually good fruit year, everything being in the best of condition with the exception of the berries, which suffered from the frequent spring rains. The prune experts of the valley are found on the Blalock orchard tracts. Here there is a single orchard of 400 acres, and in times past a large drier was in use during the summer, but of late years this method of handling prunes has been abandoned for good reason. It has been found that the quality of Walla Walla prunes is so good that they will retain their solidity until they have been shipped to any market in the world. They are earlier on the market in quantity than elsewhere in the Northwest, and therefore command a good price. On discovering this the prune growers put large forces in the field in picking season and have their prunes out early enough to more than make up any dif-

## Trans-Mississippi Congress

Subjects of especial interest to the farming and agricultural interests of the West will be discussed at the twenty-third annual session of the Trans-Mississippi Commercial Congress to be held August 27-30 in Salt Lake City. The official call for the session just issued is directed to "Commercial organizations, governors of states, mayors of cities, progressive business and professional men, farmers and agriculturists." A hearty and cordial invitation to attend and participate in the discussion of all subjects has been extended.

Among the subjects to be discussed are: See America First, Good Roads, Parcels Post, Currency Reform, World's Peace, Immigration, Reclamation of Land (by drainage and irrigation), Transportation (rail and water), Inland Waterways and other subjects of general interest to the people of the West. Governors of states, county courts and commissioners and others are invited to send delegates to this important session. Extremely low rates have been made by all railroads in the West, and a cordial reception will be extended all visitors by the hospitable people of Utah.—Contributed.

If your trees produce fancy fruit the boxes or barrels you ship it in and the cash receipts from its sale should bear every evidence of the fact. Do they? Schellenger Fruit Grading Machine Company. \*



## Officers National League of Commission Merchants, 1912



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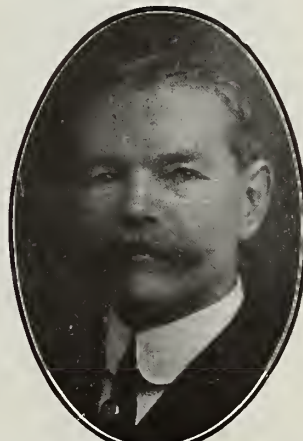
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## Enlarging the Market for Prunes

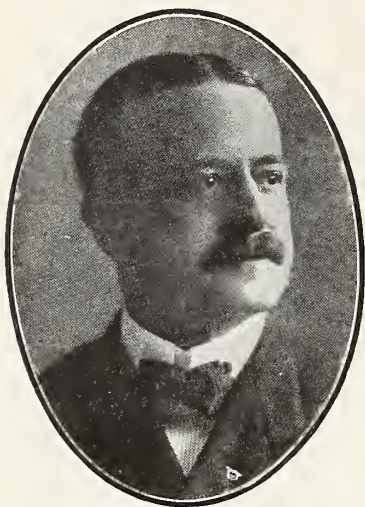
George C. Flanders before Oregon Horticultural Society Meeting

**A**PPLE is king of all green fruit and the prune is king of all dried fruit. To properly market prunes means more consumption, more demand, consequently higher prices. The present method of dumping the prunes onto

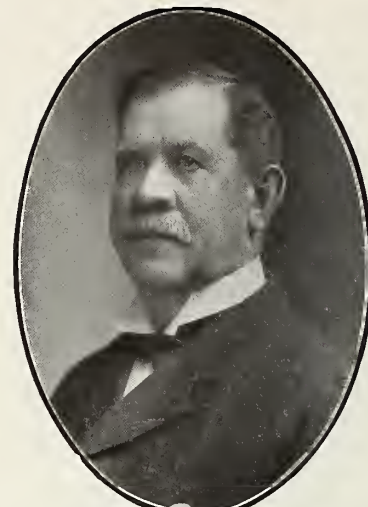
the market during the drying season is demoralizing and should be stopped. Prunes can be marketed at \$20 to \$30 per ton above any price that has been obtained in this market for the last five years if business methods are followed.

The first step to be taken is to let the growers get together and agree to do business on business lines. That is what they have never done. What they should do is to open the channels of distribution. This they have paid no attention to in the past. The growers should get together and organize and put a good man in the field to look





Wilmer Sieg, Member Advisory Board  
Hood River, Oregon

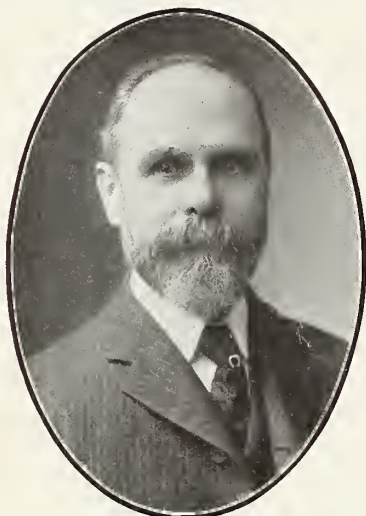


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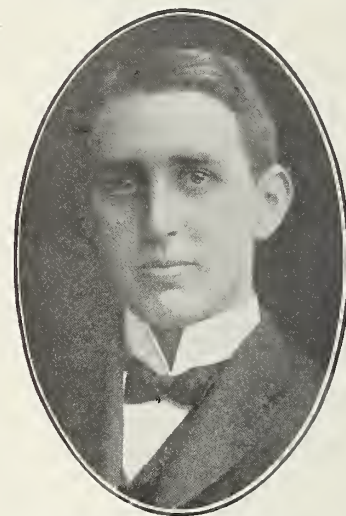
## Officers National League of Commission Merchants, 1912



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A. Warren Patch, Advisory Board  
Boston, Massachusetts



J. S. Crutchfield, Advisory Board  
Pittsburg, Pennsylvania

after the marketing end. This man should make arrangements in all large cities in the East for warehouse storage. This could be done on a basis of so much per ton per month.

He should then make arrangements with some bright young man to solicit the trade as often as once a month during the entire year. This party should solicit the business from the dealer as well as the jobber, cutting out the brokers entirely. The storage and labor for soliciting can all be done on a very small percentage basis. The idea is to get your product as near the consumer as possible, letting him know at regular periods that the prunes are waiting for his order. The good man I refer to to take charge of the marketing end should have supervision over the storage part and over the salesmen who solicit orders and see to the delivery of the prunes, and could also do some advertising in demonstrating the good quality of the Oregon prune in retail stores.

I know what the grower's objection would be to this plan. He will say: I will not put my crop into any concerns hands that will swindle me out of my hard-earned money. My dear

sir, the grower should get a deposit when he parts with his prunes equal to the full price of what he has been selling them for in the past. He should have a balance coming to him of at least \$25 per ton, to be paid later on. I do not advocate forming a company and employing a high-priced set of officers. Nothing of the kind. Every prune growing section should have a little association of its own, then be a member of a central head. One man and a clerk would be sufficient for this central head during four to six months per year. The packing of the prunes could be done in the same packing houses that are now established, at so much per ton. There are plenty of them already in existence, and they would be willing to do the packing at a reasonable price.

There are one or two other things that come under the head of marketing that I would like to touch upon. One is the facing of 25-pound boxes. This is an unnecessary expense. For two years I conducted a packing house in this city and the expense of facing the 25-pound boxes of prunes cost about fifteen cents per hundred pounds. It is a fact that those that are used to exhibit

in show windows make a better showing than those that are not faced, but I venture to say that there is not one box exhibited in this way out of one thousand. This shows that it is an unnecessary expense. Not only that, I consider it, in plain language, a filthy practice to face prunes. I have watched the facers and they use methods that I could not tolerate. I would never eat a prune from a box that has been faced. I always get my prunes for my own use unfaced, and if consumers of these fancy packages knew the conditions they would come to the same conclusion.

The direct cost of facing prunes is about three dollars per ton, but the real cost to the packing house on account of this work is not less than five dollars per ton. This on account of the delay to the packing house work on account of the facers. They always retard the work. A good-sized packing house can put out only about 1,000 25-pound boxes of prunes per day where they are faced. The same packing house could put out 2,000 boxes with less help if the boxes were not faced. If it was not for this facing work all of the large growers



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could do their own packing at a much less expense than the packing house does it. The appliances for packing prunes are very simple. A good San Jose dipper makes a first-class processor and all the growers know how to grade prunes. In fact it is a very simple matter to pack prunes and do a good job at it. To further explain the method of handling the prunes between the grower and the distributing points I wish to say that the distributing points could be supplied from time to time from the packing house from this end. It is not necessary to ship out prunes all at once and pay storage, but carry just enough to be sure that you can supply the demand at all times.

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References—Bradstreets, Duns.

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### Willamette Valley Prunes

OF the wide variety of deciduous fruits that are grown in the Willamette Valley the prune is perhaps the leader of all from a commercial point of view, and is a source of great income to the grower who gives proper attention to its culture. There are three principal varieties of this fruit—the Italian, French or Petite and the Silver. All yield splendid results, but the one which is distinctly an Oregon, and one might say a Willamette Valley prune, is the Italian, which is produced to greater perfection, size, flavor and quality than in its native clime—"Sunny Italy." The Italian prune is now known as the Oregon prune and is shipped under that name. It has gained a wide reputation and is in good demand wherever known. This prune is a fine large fruit, of which when ripe a dozen will weigh a pound. It is, unlike the French prune, slightly subacid in flavor, and when properly cooked—soaked in cold water and then simmered—is at once a delicious, nutritious and healthful food. Two hundred to two hundred and fifty bushels per acre is considered a fair yield for these prunes from the older orchards, and one hundred bushels of green fruit will make a ton of the cured product, which is worth from \$80 to \$100 according to grade, depending upon size and quality. Cost of cultivation does not exceed the cost of producing a crop of grain.

Prune harvest begins about the middle of September and continues thirty days. It is all done by hand and gives employment to thousands of families. After being dipped in boiling water, rinsed in cold water and spread upon trays, the fruit goes into driers of from one hundred to two hundred and fifty bushels capacity, where it is evaporated by artificial heat, requiring from thirty to forty hours per kiln. The cured fruit is then hauled from the drier to large packing establishments, where it is graded as to size, thoroughly cleansed and sterilized by live steam, after which it is packed in paper-lined boxes of different sizes. The whole process is conducted with great cleanliness, and the prune deserves to take the place of much meat and to find a wider and wider consumption. The largest prune district is on the hills south of Salem and on the hills to the west. These red lands are superior for the culture of its fruit and can often be bought very low. The prune also thrives upon all well drained valley soils.—Salem Booklet.

#### Editor Better Fruit:

Enclosed find my check for \$1.00 covering subscription to "Better Fruit" for the ensuing year. Your publication is improving steadily and I am more than pleased with the articles of information and interest contained therein. Yours very truly, H. M. Edgerton, Minneapolis, Minnesota.

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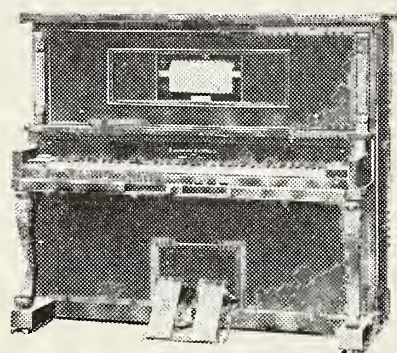
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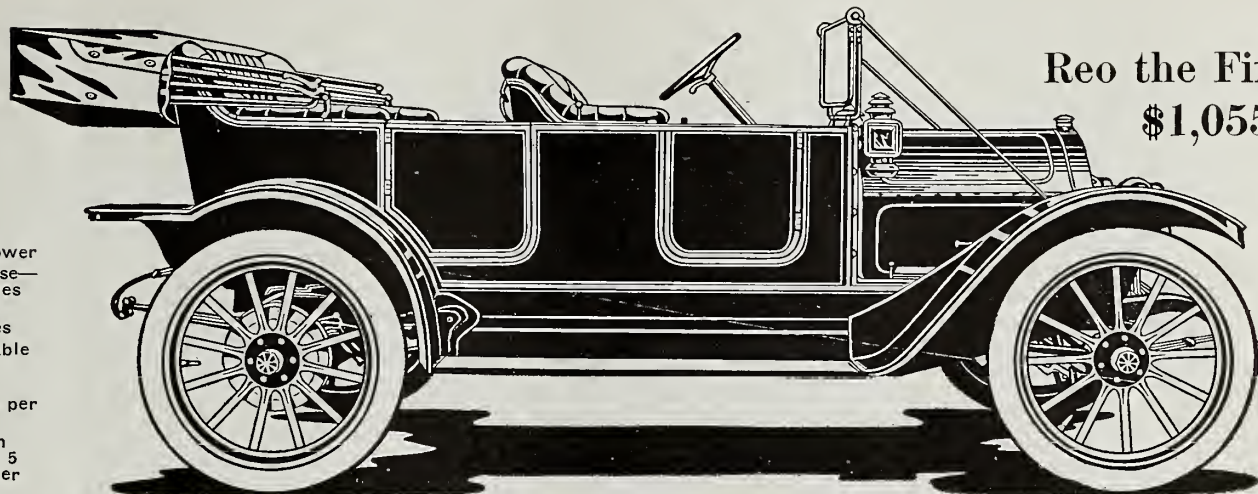
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# The Center Control

*By R. E. Olds, Designer*

Nearly every builder of high grade cars is designing a center control.

In another year, cars with side levers which block a front door will be so out-of-date as to hardly be salable.

Bear this in mind in selecting a car. The side lever car is now a back number, as every maker knows.

## Left Side Drive

In some cars the side levers are merely moved to the center. That idea won't do. Men want to get rid of the reaching. They want the front of the car to be clear.

In Reo the Fifth there is only one lever, and that is placed close to the seat. All the gear shifting is done by moving this lever only three inches in each of four directions.

There are no brake levers, for both the brakes are operated by foot pedals.

This arrangement permits of the left side drive, as in electric cars. The driver sits close to the cars which he passes. He is on the up side of the road. In making any turn which crosses a road he is sitting where he can look back.

That is the greatest reason for the center control—to permit of the left side drive. Every car is coming to it as fast as models can be changed. The side levers and the right side drive are going out at once.

## This Year's Sensation

Reo the Fifth, with the center control, has been this year's sensation. Our spring output was five times oversold.

In all the 25 years I have spent in this industry, I have never seen such a popular car.

It is this amazing demand which has driven makers to the immediate adoption of center control.

## But That Isn't All

There are other reasons beside center control for this car's immense popularity.

It is the final result of my 25 years' spent in car building. In every detail it marks the best I know.

The cars are built under my supervision. And I insist on absolute perfection.

The steel is twice analyzed, before and after treating.

The gears are tested in a crushing machine of 50 tons' capacity.

Parts are ground over and over to get utter exactness. The parts in each car pass a thousand inspections.

Engines are put through five severe tests—48 hours in all.

Finished cars are tested over and over.

There are in this car 15 roller bearings. Ball bearings are nowhere used, save in the clutch and fan.

The bodies are finished in 17 coats. The seats are luxurious. The tonneau is roomy.

With a lifetime's reputation at stake on this car, men know I am mighty careful.

## Then the Price of \$1,055

And the underprice has been another sensation. We fixed the initial price at \$1,055, which is \$200 below any car in its class.

The price of this car must soon be advanced, because of advancing materials. It is much too low. But the price remains at \$1,055 while our present materials last.

Reo the Fifth is sold by dealers in a thousand towns. Write for our catalog, showing all styles of bodies, and we will tell you where to see it. Address

**R. M. Owen & Co.,** General Sales Agents for **Reo Motor Car Co., Lansing, Mich.**  
CANADIAN FACTORY, ST. CATHARINES, ONTARIO



# BETTER FRUIT

HOOD RIVER, OREGON

OFFICIAL ORGAN OF  
THE NORTHWEST FRUIT GROWERS' ASSOCIATION  
A MONTHLY ILLUSTRATED MAGAZINE  
PUBLISHED IN THE INTEREST OF MODERN  
FRUIT GROWING AND MARKETING  
ALL COMMUNICATIONS SHOULD BE ADDRESSED AND  
REMITTANCES MADE PAYABLE TO

Better Fruit Publishing Company

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EDITOR AND PUBLISHER

H. C. RITZ, Assistant Editor

H. E. VAN DEMAN, Contributing Editor

STATE ASSOCIATE EDITORS

OREGON

A. B. CORDLEY, Entomologist, Corvallis

C. I. LEWIS, Horticulturist, Corvallis

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ADVERTISING RATES ON APPLICATION

Entered as second-class matter December 27, 1906, at the Postoffice at Hood River, Oregon, under Act of Congress of March 3, 1879.

**The Prune Industry.**—The history of the prune industry of the Northwest is very interesting in many ways. Some years ago the prune industry sprang prominently into existence on account of the quantity of prunes that were grown being comparatively small, with the demand in excess of the supply. As a consequence prunes brought good prices. The result was that many prune orchards were planted, both large and small, throughout the different sections of the Northwest. Attention was given almost exclusively to the setting of orchards and the growing of prunes. The result was that the large output of prunes soon exceeded by far the demand. Two things happened. Many growers dug up their prune orchards, and those who were far sighted enough and had good business sense and were in a financial condition to continue growing prunes, went at it to solve the problem. The solving of the problem resulted in the creation of a market for prunes, building up a demand with a wide distribution. Prunes were packed in very attractive ten-pound boxes and small gift packages were put up, which were distributed on various public occasions. Doctors recognized the value of prunes as a diet and recommended dried prunes as a food that would assist in keeping the system in good condition by creating regularity of habits. Such a diet was especially recommended to people of sedentary habits,

people working in offices and people closely confined. In a comparatively few years, through this kind of work and various other methods with which the writer is not familiar, the demand for prunes commenced increasing, and at the present time the demand is greater than the supply. The people who have prune orchards are realizing a splendid profit per acre. Again it may be said, a few years ago comparatively few fresh prunes were shipped East, but with the splendid refrigerator cars it was found that fresh prunes could be laid down in Eastern markets in prime condition. It was found there was a splendid demand for such and a large consumption. In fact, last year, on account of the scarcity of prunes, institutions like penitentiaries, insane asylums, homes for the aged and for children, that before had used evaporated prunes on their bills of fare, on account of the high price had to eliminate evaporated prunes. In view of the increased demand and the moderate supply, which does not seem to be ample, it seems that the prune industry will continue to be very profitable. Prunes are grown to perfection in various parts of Washington, Idaho and Oregon. Clarke County in Washington produces a large quantity of prunes of very high quality. The prune industry in the Willamette Valley is also large, and great quantities are raised in Southern Idaho, as well as in many other sections of the Northwest. Many prune orchards are being set, and with the better understanding of marketing problems and the increase in population one seems justified in concluding that the demand will keep pace with the supply and the industry will continue to be a very profitable one.

**Protection Against Diseases.**—During the last few years the general public has begun to comprehend how rapidly diseases are spread through carelessness and lack of cleanliness. People first learned that the mosquito was one of the worst insects for carrying malaria. Perhaps the most striking example of what sanitary conditions have done is the work done by the government along the Panama Canal in the way of sanitation work, which enabled white men to live in good health while constructing the canal, where before, while the French had charge of this work, the employees died by the thousands. But perhaps the worst carrier of all diseases is the ever present fly. Some enterprising man has invented a little article, something similar to a miniature tennis racket, which is called "swat the fly." Everybody today is swatting the fly. On nearly all doors and windows in houses all over the country we find screens to keep the flies out, and when one does get in it is killed with the swatter. It is well known that manure heaps and out-of-door closets are not only great breeding places for flies, but from such places all kinds of diseases are carried. Country people in particular should give close attention to sanitary condi-

tions prevailing on the farm. Out-of-door closets should be eliminated as fast as possible. Where running water can be had good plumbing can be put in, but every farmer and orchardist does not have running water and the water has to come from a well by pumping. An invention has been put on the market called the sanitary closet, and as health is a very important matter it would be wise for every farmer who does not have plumbing throughout his house to investigate this closet, which is being sold by the Sanitary Closet Company, of Portland, Oregon, whose advertisement appears on another page of this issue. Complete particulars in the way of price lists and descriptions will be furnished upon request.

**The Pacific Northwest Land Products Show.**—Portland for several years has given annually a wonderful attraction in the way of the Portland Rose Show. The Rose Show has been more in the nature of an attraction, a festival and jollification. The Oregon Horticultural Society has always held its meeting and given an annual exhibition of apples which has commanded the attention of everybody. It is a pleasure to learn that the business people of Oregon, though the Commercial Club, Chamber of Commerce and other public organizations, have volunteered to assist by assuming the responsibility of financing a show, the like of which has never before been given in the Northwest. Portland will hold this year the first show of the "Pacific Northwest Land Products Show." This is to be given in November. The wisdom of giving the Land Products Show instead of an apple show alone will command the interest of all farming industries and all business men throughout the entire Northwest. We feel justified in saying in advance that this will be one of the greatest shows ever held west of the Mississippi River. As soon as complete information and data is out in reference to the show, prizes, etc., "Better Fruit" will furnish the information through its columns, feeling that all of the readers of "Better Fruit," both in the Northwest and in the East, will be very much interested.

This is a special prune edition. No other horticultural paper, so far as we know, has ever published an edition devoted exclusively to the prune industry. "Better Fruit" is up-to-date in its recognition of the prune industry, and in a desire to promote a worthy and profitable business has seen fit to devote the August edition to the prune industry. Articles on every feature of the prune business are contained in the columns of this edition, which will be interesting to all prune growers, to those who expect to engage in the industry and to dealers who are engaged in selling both green and evaporated prunes. The articles are well written and this edition is well illustrated with views pertaining to the growing and marketing of prunes.

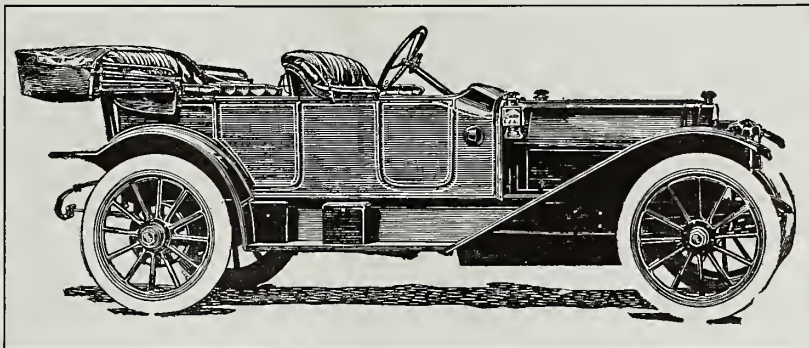


# A Big Fruit Crop This Year "Spells" "Lots of Money for the Fruit Grower"

**You'll Want  
An Auto**

**EVERYBODY  
DOES**

**INVESTIGATE  
The *Mitchell*  
4 and 6  
Cylinder Cars**



*Mitchell*  
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**78 Years'  
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Experience**

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**PORTLAND  
SEATTLE  
SPOKANE  
BOISE**



**IN OREGON  
WASHINGTON  
AND IDAHO**

**30 Years in Business in the Northwest**

Every prune grower should show his appreciation of the splendid work "Better Fruit" is doing in devoting practically all of the space in the August edition for the benefit and advancement of the prune industry. "Better Fruit" has done more for the fruit industry of the Northwest than all the other publications combined. The prune grower will find "Better Fruit" will contain valuable information in every issue on general subjects. Every edition of "Better Fruit" will be far more general than it has been in the past and will contain articles pertaining to every kind of fruit that is grown, in which the prune industry will play a prominent part from now on. We believe every prune grower should subscribe to "Better Fruit," price one dollar per year, and we feel sure every prune grower will get value received.

**The Indiana Apple Show.**—Announcements are out for the Indiana Apple Show, to be held November 13-19, 1912, at Indianapolis. The show was a great success last year and this year efforts are being made to make it not only more attractive but larger in every way. Prizes will be given for one hundred and five different plate varieties, also for one box each of twenty of the principal varieties, and for five and twenty-five box exhibits in ten different varieties. Further information and particulars can be secured by writing C. G. Woodbury, secretary of the Indiana Apple Show, Indianapolis.

## Lithography



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**PORTLAND**

**SEATTLE**

**LOS ANGELES**





Our apple buds. Photo July 25, 1912



Our two-year apple. Photo July 25, 1912

## You Will Find Nothing to Surpass This in Any State in the Union

The careful orchardist who considers quality and service cannot afford to pass up trees like that, grown and delivered by a concern like the Washington Nursery Co.

To the man who wants some extra large trees we will call attention to those two year above. We have exactly the same stock in Newtown, Spitzenberg, Winesap, Rome Beauty, Jonathan, Wagener and Mackintosh.

Here are recent comments of customers, salesmen and deliverymen. They all breathe satisfaction. We delivered nearly twelve thousand individual orders last season. We have any number of similar expressions. Names on application.

### Some Recent Comments from Customers

Lenore, Idaho, May 24th, 1912. "People are getting interested in this section in fruit, and you are entitled to the business as your stock is surely first class."

Lakeview, Oregon, May 27th, 1912. "Everybody is so well pleased with trees. Your methods are certainly good; can do business for you with pleasure."

Huntley, Montana, June 8th, 1912. "Our trees delivered this spring were certainly the finest lot that ever came into Huntley, and we are getting some excellent advertising through customers who received them. The deliveryman said they were the best he ever handled, and he has delivered for several nurseries every year. He had trees from other nurseries at his garage at the time ours were being delivered and the comparison was something painful—for the other fellows. An old nurseryman and experienced planter said our trees had the best root system he ever saw."

Newberg, Oregon, March 28th, 1912. "I have had a chance to compare the root system of your apple trees with those of several other nurseries this spring and must say you have them all beaten. In the other fellow's lot, what might have been a splendid tree is spoiled in digging—yours were cut long and there were no split up roots. You can rely on my future orders for apple trees."

Tacoma, Wash., May 5th, 1912. "Mr. [redacted], deliveryman of Milton, Wash., also handled other trees too, but said ours were far ahead of any he had ever seen and would handle no others this year."

Clagstone, Idaho, May 4th, 1912. "The stock you sent my customers this spring was fine and gave satisfaction in every instance."

Helix, Ore., March 29th, 1912. "We are well pleased with your stock."

Portland, Ore., April 1st, 1912. "Mr. [redacted] writes that you sent us a fine looking lot of trees."

Valleyford, Wash., April 2d, 1912. "Every customer was well pleased with the stock and when in need of any more I think you will get their orders."

Jerome, Idaho, April 7th, 1912. "Trees received in good shape and perfectly satisfactory."

Missoula, Mont., April 8th, 1912. "One thing I want to tell you, that all of the customers are well pleased with the stock you delivered to them. I never get tired of recommending your stock."

Ford, Idaho, April 8th, 1912. "The stock is in good condition and the best I have ever seen in any country."

Post Falls, Idaho, April 12th, 1912. "The trees opened up all O.K. and were a fine lot. Everybody pleased."

Sandpoint, Idaho, April 12th, 1912. "Will say they were the nicest trees that came to this town. I saw some of the other nursery stock they were very poor beside of ours."

Sunnyside, Wash., March 11th, 1912. "The trees were received in good order and are planted, and we shall endeavor to take proper care of them. We wish to thank you for liberality and assure you we shall always speak a good word for the Washington Nursery Company."

Kiona, Wash., March 14th, 1912. "They are as fine trees as I ever saw. Thank you very much."

North Yakima, Wash., March 30th, 1912. "The trees you sent came in good time and in good condition. Ora hauled them out and heeled them in and told me they were the best lot of trees he had ever seen."

Independence, Ore., March 10th, 1912. "Trees and everything giving splendid satisfaction, both here and Monmouth."

Centerville, Wash., March 25th, 1912. "The trees and berries arrived last week in excellent condition and are fine. We surely are well pleased with them and are certainly grateful to you for your splendid treatment of us."

Rosemary Orchard, Penticton, B. C., May 1st, 1912. "I beg to inform you with much thankfulness and pleasure that your trees arrived perfectly safe, with the card notice to be on hand upon their arrival. They are the finest trees I have ever seen, surpassing all my expectations. I may tell you that the one-year-old Spitzenberg trees you sent me three years ago are bearing this year."

Sheridan, Ore., July 29, 1912. "Will you accept an order from me for 150 to 300 fruit trees, mostly Newtown Pippins, for delivery at Willamina, Oregon, any time in November? These trees are for the purpose of resetting tracts in a large orchard here of which I have charge, and the people seeing the condition and growth of trees I bought from you in the spring of 1911, wish me to get trees from you for replacing missing ones in their orchard tracts. I have not counted up yet to know just how many I will need, but will do so on receiving an answer from you, and let you know at once. I wish to do the replacing by the last of November. My trees I purchased from you and planted in March, 1911, numbering 870 trees, have done splendidly and exploded the idea of not planting irrigated trees on non-irrigated land. I lost from death or failure to grow four trees out of the shipment of 870. Kindly let me hear from you about this matter."

We want the business of every discriminating buyer, large or small. We grow good stock on clean soil and mature it before digging. We cultivate incessantly and develop a perfect root system. We handle our stock in a systematic manner from the time it is planted as a seedling, all through the grafting, budding, growing, digging, packing and shipping. If we did not feel we could please you we would rather not try to fill your order. But we know we can satisfy you.

Over twice the business on our books today than at same date a year ago.

GOOD REASON—QUALITY AND SERVICE.

# WASHINGTON NURSERY CO., Toppenish, Washington

MR. SALESMAN, IF YOU WANT A JOB WRITE US



# THE NATIONAL APPLE COMPANY HOOD RIVER OREGON

Desires to make permanent connections in each large city of the United States for the sale of the beautiful and delicious

## CHRISTMAS APPLE The Hood River Blood Red Spitzenberg

WRITE US

NATIONAL APPLE COMPANY, Hood River, Oregon

### The World-Famous Italian Prune

By Professor C. I. Lewis, Horticulturist, Oregon State Experiment Station

PROBABLY no fruit has gone through more vicissitudes than the Italian prune. There is no doubt but that probably fifteen or twenty years ago the industry was overdone, but this

was due to several very well-known causes. People did not understand how to grow the prune and knew still less about how to evaporate and process it, consequently large quanti-

ties of poorly dried prunes were forced on an unadvertised market and the trade rebelled, but we find this condition is changed now. The prune is in a very flourishing condition and has every indication of continuing so. In Oregon, for example, it is the second fruit of importance and some years ranks first. There is a revival of interest in the planting at this time and many Easterners are buying up large acreages and planting them to the prune. Recently one of the largest dried fruit buyers in the country has come to Oregon and is investing heavily in prunes, believing that one of the finest investments is that of the Italian prune. He stated that the indications all pointed this out very strongly and that the demand was greater than the supply. Ten years ago a certain foreign jobber refused to take Italian prunes as a gift. Two years ago his first order was for 30,000 pounds.

In the Pacific Northwest the prune is becoming just as famous as our apples and pears. While phenomenal profits are not realized, a very good income can be obtained on the investment. Prunes pay from \$80 to \$300 per acre net and there is an abundance of cheap land adapted to the prune. It tends to be more regular in bearing habits than some of our other fruits. It requires less technical skill to grow prunes than any other class of fruit. There are few insects and troublesome pests which attack prunes, and with a small amount of work prunes are grown very profitably. This means that many of the prune growers are careless. The great needs of the prune growers are better co-operation, better organization and a better understanding of each other. There is no doubt but what the yields can be greatly increased in all cases if better methods are pursued. The new orchards are receiving the same attention that is being given to our apples and pear orchards. Foreign countries are demanding more and more of the fruit, and there are certain prune by-products that we are paying no attention to that could be developed into large industries. The Pacific Northwest has got a monopoly on the Italian prune

## J. H. LÜTTEN & SOHN HAMBURG GERMANY

### Fruit Brokers and Importers

Est. 1835

Sales Room "Fruchthof"

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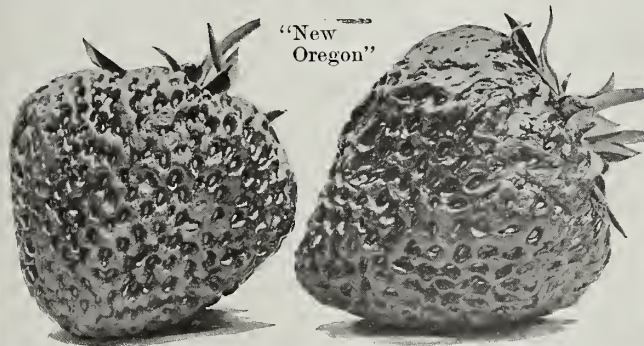
Speciality in Finest Table Apples Packed in Boxes

Please note that we sell all apples personally

C. W. WILMEROTH, Pacific Coast Representative P. O. Box 1898, Seattle, Washington

## Oregon Grown Strawberry Plants

Western Varieties for Western Growers



### "NEW OREGON"

Heaviest yielding, most uniform main crop strawberry; rich deep red, solid clear through; flavor the finest, season the longest.

"NEW OREGON" excels all others.

Plants ready in September.

See Catalog.

### OUR "DIAMOND" QUALITY Strawberry Plants

are large and healthy with heavy roots and full crowns. Grown by the most approved methods for plant production.

**THE VARIETIES** we offer are the leading commercial sorts; our select strains are the true ones and plants are the best that can be produced.

Shipments begin in September and you should order early for delivery in season. For prices and description see our catalog.

32 page book on Strawberry Culture FREE.

Portland Seed Co., Portland, Oregon





# Yakima County Horticultural Union

NORTH YAKIMA, WASHINGTON

E. E. SAMSON, Manager

Established 1901; an eleven-year period of steady growth

If interested in Peaches, Pears, Prunes, Plums or Apples, in straight or mixed cars, we ask your correspondence

## Our "BLUE RIBBON" and "RED RIBBON"

Brands are the best that YAKIMA VALLEY produces

Fancy Fruits Our Specialty

## Terminal Ice and Cold Storage Co.

A COLD STORAGE PLANT, MODERN THROUGHOUT,  
AT THIRD AND HOYT STREETS, PORTLAND, OREGON.

Fruit growers or apple growers and dealers of the Western markets in and around Portland, who have watched the markets closely for the past few years, have learned that in the spring there is always a good demand for apples, and that they usually bring good prices if they are in good condition. There is only one way to keep them in good condition for spring consumption, and that is to put them in cold storage.

We offer the best of cold storage facilities in the city of Portland and solicit correspondence from all the associations and fruit growers in general who want to store fruit in the fall or early winter to be used in the spring.

Write us and we will give you further particulars.

**TERMINAL ICE AND COLD STORAGE CO.**

THIRD AND HOYT STREETS, PORTLAND, OREGON

## Oregon Agricultural College

### SOME FACTS ABOUT O. A. C.

- First** O. A. C. is an institution with a history, an honorable and glorious history of nearly fifty years' service in the cause of industrial education.
- Second** O. A. C. has graduated more than 1,200 young men and women who are now engaged in "dignifying the industries" of Oregon.
- Third** O. A. C. was attended by 2,868 students in 1911-12.
- Fourth** O. A. C. has 27 modern, well equipped buildings, affording every opportunity for advancement in the study of its industrial courses.
- Fifth** O. A. C. offers nine distinct courses, namely, Agriculture, Domestic Science and Art, Forestry, Civil Engineering, Mechanical Engineering, Electrical Engineering, Mining Engineering, Commerce, Pharmacy and Music.
- Sixth** O. A. C. offers Winter Short Courses in Agriculture, Forestry, Domestic Science and Art, Mechanic Arts, Commerce and Music.
- Seventh** O. A. C. employs 150 officers, instructors and research assistants.
- Eighth** O. A. C. is the largest institution of higher learning in Oregon, and is numbered among the largest west of the Mississippi.
- Ninth** O. A. C. leads all institutions of the Union in Horticulture.
- Tenth** O. A. C. has a cadet regiment that is ranked among the most efficient college military organizations in the United States.
- Eleventh** O. A. C. is located in one of the most beautiful cities anywhere. Corvallis, the "Heart of the Valley," has paved streets, sparkling mountain water, perfect sewer system, eleven churches, and no saloons.
- Twelfth** O. A. C. is a democratic and cosmopolitan institution. It welcomes the sons and daughters of every state and every nationality, but particularly citizens of Oregon. Its mission is to serve the people.

THE OPENING DATE IS SEPTEMBER 20, 1912.

For information, address H. M. Tennant, Registrar, Corvallis, Oregon.

## Puget Sound Prune Growing

Large and successful prune growing in our Northwestern country runs farther north than one might infer from the reading of the interesting article on the subject in a recent number of the Western Farmer. One of the finest orchards of the Italian prune that I remember to have seen was that of the Moggridge Bros., in British Columbia, a little south of the Fraser River. It contained some fifty acres in area. There is a still larger orchard of the same prune near East Sound, on Orcas Island, in San Juan County. The fruit is also largely grown in this (Skagit) and Whatcome Counties. And as to the producing capabilities of the Italian prune here on Puget Sound, I may cite my own orchard on the banks of the Skagit River, which gives an annual yield of fifteen to twenty tons per acre; and the orchard is kept in grass and pastured nine months of the year besides.

This prune as grown here is much larger in size than that grown east of the Cascades—the fruit absorbing a great deal of water from our moist atmosphere—and when fully ripe is soft. Hence it is a difficult fruit to handle in the drying process; nor does it ship well. But of late there is a demand for our prunes in the preserving plants, which take them before the ripening process is perfected.—Western Farmer.

## Farming Chances

The government does not think that farming is overdone. In fact, it believes that the unemployed should be more generally distributed on the farms, and, through the Department of Commerce and Labor, it has just issued a publication entitled "Agricultural Opportunities," which can be had free on application to the department in Washington. The bulletin discusses briefly the climate, surface, soil, irrigation and dry farming (where practiced), principal crops, stock raising, prices of land and inducements to settlers, farm expenses and general inducements of different sections, including the North Atlantic states, the North Central states, the South Central states, the Western states, including Alaska, and the southern group of Western states, including the Hawaiian Islands. Those interested are told where they can get fuller information.—F. J. Dyer, Washington, D. C.

ESTABLISHED 1863

**C. H. WEAVER & CO.**  
COMMISSION MERCHANTS

Pacific Coast Fruits

Apples, Peaches, Pears,  
Plums, Grapes

Dried Fruits, Etc.

65 and 67 West South Water Street  
CHICAGO, ILLINOIS

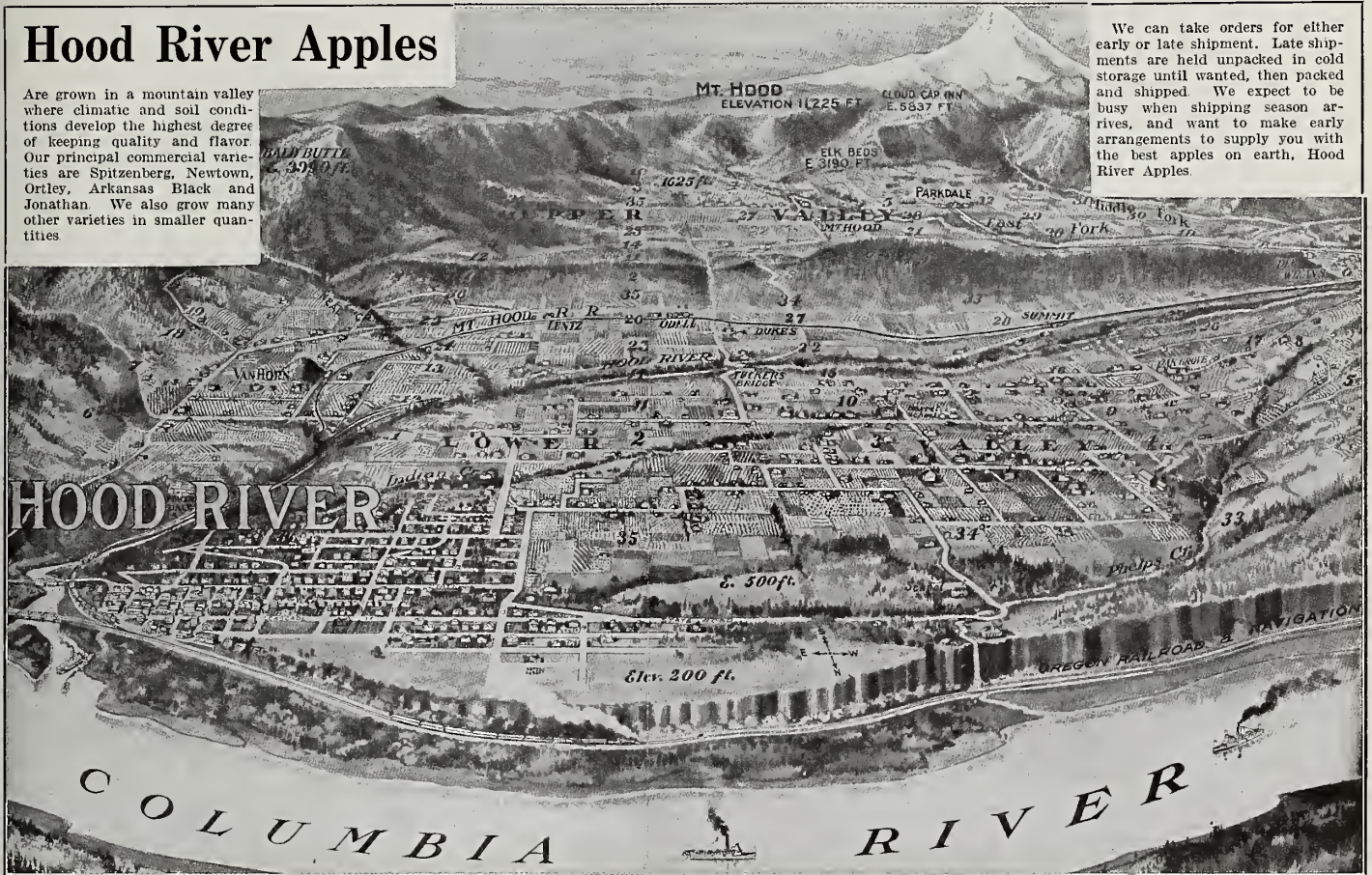


# DAVIDSON FRUIT CO., HOOD RIVER, OREGON

## Hood River Apples

Are grown in a mountain valley where climatic and soil conditions develop the highest degree of keeping quality and flavor. Our principal commercial varieties are Spitzenberg, Newtown, Ortley, Arkansas Black and Jonathan. We also grow many other varieties in smaller quantities.

We can take orders for either early or late shipment. Late shipments are held unpacked in cold storage until wanted, then packed and shipped. We expect to be busy when shipping season arrives, and want to make early arrangements to supply you with the best apples on earth, Hood River Apples.



## Sell Prunes on Trees for \$35

Prunes of the Milton-Freewater district have been sold for \$35 a ton on the trees. This means the entire crop that is handled by the Milton Fruit-growers' Union, Manager H. D. Lamb announcing the sale to the Gibson Fruit Company of Chicago yesterday. It is expected that some 100 cars will be shipped this year. While the price is five dollars a ton better than that of last year the crop this year will be appreciably smaller, according to fruit-growers, amounting to something like sixty per cent of the yield of 1910. However, the yield will be nearly normal, that of last season being far in excess of the average prune yield. The price of \$35 a ton net to the grower is equivalent to about \$48 or \$50 straight sales, fruit packed and delivered f.o.b., according to the figures of the fruit-growers' organization. Most of the orchardists are well pleased with the sale, although some believe it would have been better policy to wait until fall to sell.

Walla Walla Valley prunes are in demand and every prune in the entire district will be gobbled up before it is ripe if the growers will sell. Buyers have already gone through the country and have picked up many of the choice lots, as is evidenced by the big Milton deal, the largest prune sale, in all prob-

ability, that will be made in the valley this year. Buyers are much impressed with the outlook for prunes in the valley and have expressed themselves that this section yields the best prunes in the world. Ray Ellis, representative of an Oregon nursery, thus went on record on his last visit to the valley; and none of the buyers but was willing to admit the Walla Walla Valley is producing the best prunes on the market.—Walla Walla (Washington) Union.

### Editor Better Fruit:

Am very much pleased with your magazine, as are all the others in this locality. Yours very truly, W. J. Higgins, White, Salmon, Washington.

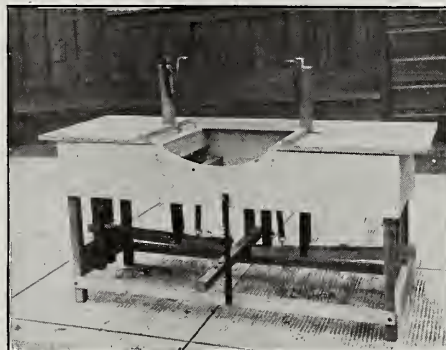
**FERTILE VIRGINIA FARMS**

**\$15.00 PER ACRE**  
and Up. EASY PAYMENTS

Productive soil, mild climate, fine water, good roads, close markets, unsurpassed school and social advantages. **Yearly Rainfall 45 inches.** Now, while you think of it, write for the latest issue of "THE SOUTHERN HOMESSEEKER," other literature and low excursion rates.

Address, F. H. LaBAUME, Agr'l Agt.,  
Norfolk and Western Ry.,  
Box 3047 Roanoke, Va.

**N&W RY**



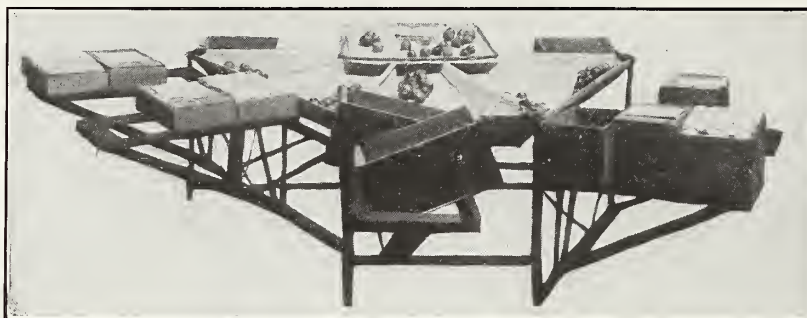
## HOOD RIVER Box Nailing Press

The real original nailing press that helped make Hood River apples famous by eliminating box bruises, is now being manufactured and placed on sale. The most economical, convenient and best nailing press on the market. For particulars and price list write to

**W. G. SNOW, Hood River, Oregon**



# The Sykes Sorting and Packing Table



A distinct advancement in sorting and packing.

The sorting and packing become one continuous operation, with the entire crew working as one unit.

A better graded and packed box in less time and at lower cost cannot help but appeal to you.

There is less handling of the fruit, a closer grade, a larger output with the same sized crew, and a consequent lowering cost of the finished product than can be obtained by any other method.

Light in weight and occupying but little space, it can be used equally well either for packing in the orchard or packing house.

If saving \$ \$ \$ \$ in your sorting and packing interests you, write us concerning the Sykes Table.

## The Hardie Manufacturing Co.

Hudson, Michigan

49 North Front Street, Portland, Oregon

Seattle, Washington.—The following statistics have been published in reference to Seattle, which indicate the wonderful growth and prosperity of one of the magnificent cities of the Northwest. The statistics published about Portland, Seattle, Tacoma and Spokane are all indicative of the immense prosperity and the opportunity that exists in all the smaller towns and farming communities of the States of Washington and Oregon. Seattle is the metropolis of the Pacific Northwest. Located on Puget Sound, an arm of Pacific, it possesses one of the finest deep water harbors in the world. The city rests on a series of hills between Puget Sound, the west boundary, and Lake Washington, the

east boundary, while two large lakes, Green Lake and Lake Union are are entirely within its limits. The Olympic Mountains tower to the westward with the Cascades to the eastward, and beautiful Mt. Rainier completes the picture to the south, the hills, lakes, sound and mountains forming a natural setting which is incomparable. Commercially Seattle has more commerce, more manufacturing, more railroads, more population than any city in the Pacific Northwest.

Population (1910 census).....	237,194
Population (1911 directory).....	280,485
1910 Bank clearances .....	\$590,093,364.00
1910 Bank deposits .....	74,943,405.00
1910 Postoffice receipts .....	1,000,512.67
1910 Customs receipts .....	1,157,490.96

1910 Building permits .....	17,418,078.00
1910 Exports .....	46,278,807.00
1910 Imports .....	49,812,233.00
1910 Tonnage through port, tons .....	5,368,453
Assessed valuation of city (48%) .....	\$205,262,448.00
Bonded indebtedness of city....	10,661,380.00
Paved streets, miles .....	140
Planked streets, miles .....	101
Water mains, miles .....	425
Light circuits, miles .....	1,129
Cluster lights, miles .....	16
Graded streets, miles .....	522
Sidewalks, miles .....	840
Gas mains, miles .....	352
Sewers, miles .....	303
Street railways, miles .....	221
Area of city—Land, square miles.....	58
Water, square miles .....	36
Total, square miles .....	96
Salt water shore line, miles.....	40
Fresh water shore line, miles.....	40
The city owns its own light and water plants.	

## WEIL, TURNBULL & CO.

DETROIT, MICHIGAN

NINTH LARGEST CITY IN THE UNITED STATES

Will sell your goods at auction or at private sale. We have a large interest in the United Fruit Auction Company here and will guarantee best possible results and prompt remittance. Correspond with us if you contemplate doing business in Detroit. We will furnish references that will justify you in making us your Detroit connection.

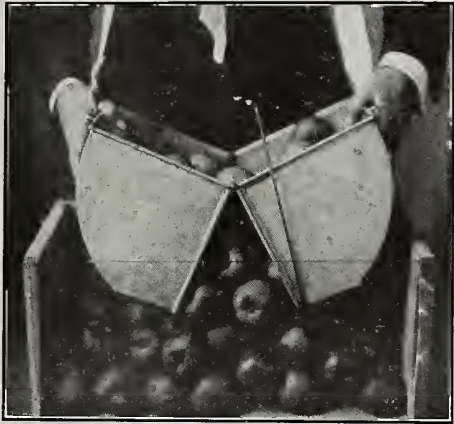


# A Money and Fruit Saver

A HIGHER STANDARD — BETTER FRUIT

The successful orchardists of the Northwest are using the Palmer Bucket because it is necessary in the proper handling of fruit. It saves the bruises and scratches.

If your hardware store has them, they will show you how the bucket is operated; or send \$1.50 and we will forward one by express.



THE START

**Palmer  
Fruit  
Picking  
Bucket**



PARTLY OPENED

**PALMER BUCKET CO., Hood River, Oregon**

# Do You Know?

THAT NOW-A-DAYS

The automobile replaces the ox-cart

The flying machine the stage coach

The wireless the pony express

The graphophone the lady conversationalist

AND THAT THE

## Capital City Nursery Company

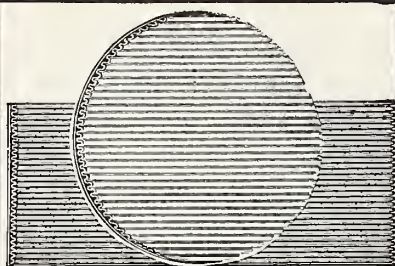
Is up with the times, catering to the up-to-date demand  
of the American people

No order is too small nor none too large  
to be given proper attention

413-415 U. S. National Bank Building

SALEM, OREGON





## APPCO

### CORRUGATED Barrel Caps and Box Lining

Better fiber, deeper corrugations and more of them, and, better gluing makes the APPCO line better for you.

#### Here is Our F. O. B. St. Louis Price:

	Per 1,000
Single-Faced Caps, 12 inches, -	\$4.25
Single-Faced Caps, 14 inches, -	5.50
Single-Faced Caps, 15 inches, -	6.25
Single Faced Caps, 16 1/2 inches, -	7.00
Double-Faced Caps, 16 1/2 inches, -	10.50
Box Linings, 11 x 18 inches, - -	6.00

Don't buy until you see a sample of the APPCO line. Write for sample, stating about how many you will use. We make the entire APPCO line in St. Louis and can ship any quantity at once—instantly.

Try the APPCO Dozen Box for shipping fancy apples this year. Ask for our "Fruit Bulletin" which pictures, describes and prices our entire line of Fruit Packers' Specialties. Address,

**American Paper Products  
Company,**

252 Bremen Ave., ST. LOUIS, MO.

## TARRED ORCHARD YARN

### FOR YOUR TREES

Right down to the minute method, for supporting heavily laden branches.

Does not interfere with pruning, spraying, cultivating or thinning.

Does not chafe the limbs, when swayed by wind.

Being tarred, does not harbor insects.

Cheaper than props, and branches easily tied.

Sold by all dealers.

Manufactured by

**The Portland Cordage Co.**

PORTLAND, OREGON

## RICHLAND NURSERY CO.



### TREES

Not little sprouts or saplings, but healthy specimens with perfect ROOTS

We go strong on roots, for we know your future harvest and our future business depends on root insurance—Good roots mean good fruits. Catalogue is yours for the asking.

Richland Nursery Co.  
Richland, Washington

## Will Be First Big Land Show

Portland is to be the home of the first big land show ever held in the Pacific Northwest. A local committee of business men, which was making plans for an apple show this winter, has become enthusiastic over the possibilities and decided not to limit the exhibits to one product of the soil, but to include all. Every Pacific Northwest State will be invited to participate with exhibits, and the only thing that is worrying the local committee is to find a location big enough to house all the farm products that will be gathered here. The assurance is given, however, that a suitable place will be provided, even if a temporary structure has to be built. Plans so far made provide for the holding of the land show during the final two weeks of November or early December. At that time the Northwest States will have harvested the biggest crops in their history, and the farmer will have something worth while to show to the less favored people in the cities and of other sections of the country.

G. E. A. Bond, for three years assistant secretary of the Spokane National Apple Show, has been engaged as secretary-manager of the coming land show and headed by the Portland Commercial Club, the State Horticultural Society and the Oregon Development League, practically all organizations of influence in the state, have given the proposed show their hearty support. It is the plan to make this land show an annual event in Portland, and it is expected it will grow in importance with each passing year. It is expected to prove as big an attraction for the winter as the annual Rose Festival is for the summer.—Exchange.

## Portland Land Products Show

THE Pacific Northwest Land Products Show will be held in Portland, Oregon, under the auspices of the Oregon State Horticultural Society, November 18 to 23 inclusive, and full explanatory literature and premium lists will be sent out in the near future. This show is the expanding of the scope and purposes of the Oregon Apple Show, after careful consideration by the board of directors and the officers of the Oregon State Horticultural Society, and a conclusion reached that the interests of those engaged in the many branches of agriculture should be recognized, as well as the interests of the orchardists. Therefore every district in the Pacific Northwest will be invited to arrange for competitive exhibition, collective displays of all orchard and soil products grown in and best adapted to their respective localities. To the orchardist, districts, commercial clubs and other exhibitors will be offered attractive cash and other premiums of value as an inducement to exhibit in classes competing for premiums the best of their commercial fruits and products.

The Pacific Northwest Land Products Show will be educational in character and all its purposes, and by collecting

# Orenco Trees

Hold the same position among trees as do Tiffany diamonds among diamonds. In other words—

## There Are None Better From Any Standpoint

Our one-year-old apple trees in Y. N. Pippin, Rome Beauty, Jonathan, Delicious, Winter Banana, Spitzenberg, McIntosh Red and Winesap simply can't be beaten.

If you are particular and want choice stock—something better than the average, we can fill your wants complete. Orenco trees are all grown under our own supervision. They are dug, graded, packed and shipped by experienced men. Our complete organization gives you every protection and safeguards your interests in the purchasing of your trees. We deliver your trees at **your railway station** without extra cost to you.

Don't fail to know all about ORENCO TREES before buying elsewhere. Write us now.

## Oregon Nursery Company

The Big 1200-Acre Nursery

ORENCO, OREGON

Salesmen who can sell—wanted

## A FINE CHANCE

To get experienced man (horticultural graduate) to develop large orchard tracts on salary or profit-sharing basis. Splendid references. Box 174, Forest Grove, Oregon.

in one grand display all that the orchard and soil produces will enable districts and individuals to compare their fruit and other crops with all other sections; to consider the effect of soils and climatic conditions, and thus learn what varieties are best suited to their own locality. Spraying, pruning and other educational demonstrations will be given daily. Another interest



that will be benefited in an educational way is the man looking forward to the time when he can get back to the land. In the past the information given him has been confined mostly to the apple and other tree fruits, and it is now proposed to give him the tangible, indisputable evidence he wants—what each and every district in the Pacific Northwest will produce. This will interest the land seekers and tend to bring settlers to all localities.

As the Pacific International Dairy Show Association will hold their exhibition on the same dates in Portland it will be an additional attraction, not only to exhibitors but to all visitors interested in these particular lines. This advance information is sent out in order that each district may collect and care for specimens of such early-maturing products as it may desire to exhibit.

Now is the time to collect such specimens. Any information regarding this exhibition may be had by addressing the secretary-manager, Mr. G. E. A. Bond, 201 Commercial Club Building, Portland, Oregon.

#### Editor Better Fruit:

I wish to express my appreciation of your valuable paper. It is the best fruit paper that I have seen. I consider it authority on fruits. I haven't been able to find as good material anywhere else as you put in the special issues. Yours respectfully, A. M. Richardson, Snohomish, Washington.

#### Editor Better Fruit:

Enclosed find a check in payment of ten extra copies of the July issue. Yours truly, Minnesota Fruit Company, Duluth, Minnesota.

## FIFTY-FIRST Annual Oregon State Fair, Salem September 2-7, '12

**\$18,000 OFFERED IN  
PREMIUMS**

On Live Stock, Poultry,  
Agricultural,  
Manufactured and  
Other Products

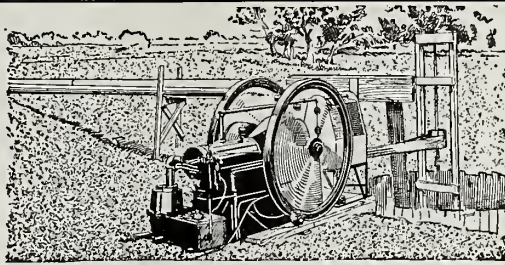
Horse Races, Dog Show,  
Shooting Tournament,  
Band Concert, Fire Works  
and Free Attractions

SEND FOR PREMIUM LIST AND ENTRY BLANKS

REDUCED RATES ON ALL RAILROADS

For Particulars Address

FRANK MEREDITH, SECRETARY  
SALEM, OREGON



## Irrigation Is a Necessity

**T**O secure the most favorable conditions for the successful growing of crops of nearly every description, irrigation is a necessity. An independent pumping plant furnishes the highest form of irrigating efficiency. To be sure of having as much water as your crops need at just the right time, to eliminate any chance of delay, your plant should be run by a reliable engine that will operate anywhere and at any time the conditions may demand. The engine that you can always depend upon is an

## I H C Oil and Gas Engine

I H C engines are built right, run right and stay right, because they are made of the best material, built by skilled workmen and thoroughly tested before leaving the factory. The record and capacity of each engine is known positively before shipment. Each I H C engine is more powerful than it is rated. You can depend upon an I H C engine to furnish ample power for irrigating, sawing, grinding, running the feed grinder, hay press, or any other farm machines. In short, when you buy an I H C engine you are sure of having your work well done, and done on time. What is such assurance worth to you?

I H C engines are made in every style—air and water cooled; horizontal and vertical; stationary, portable and mounted on skids; to operate on gas, gasoline, kerosene, naphtha, distillate, or alcohol. Sizes, 1 to 50-H. P.; tractors 12, 15, 20, 25 and 45-horse power. Sawing, spraying, and grinding outfits, etc., are included in the line.

See the I H C local dealer for catalogues and full information, or write the nearest branch house.

WESTERN BRANCH HOUSES: Denver, Col.; Helena, Mont.; Portland, Ore.; Spokane, Wash.; Salt Lake City, Utah; San Francisco, Cal.

### International Harvester Company of America

(Incorporated)

Chicago

I H C Service Bureau

U S A

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A



## SHIPPERS IT IS TIME TO GET READY FOR FALL SHIPPING

One of the first things the successful shipper does is to make up his "mailing list" of firms, such as receivers to whom he expects to sell, and brokers through whom he expects to sell, that he may be prepared to quote these parties regularly from time to time during the season without having to stop and look them up.

Now, it is of the utmost importance that no "crooked" dealer or firm of doubtful financial or bad business standing should be included in this list. If the quotation or mailing list is composed entirely of reliable commission houses and brokers to start with, one of the greatest causes of future trouble will have been removed.

What guide are you going to use in making up this list? What better guide is there than the Blue Book furnished by that great National Organization called the Produce Reporter Company? The ratings assigned to dealers, and the clear and simple explanation of the specialties handled by these dealers and the volume of their annual business, enables any intelligent shipper to immediately check up in the Blue Book such reliable firms as will be interested in what he has to offer. In fact, many shippers simply check up the Blue Book and do not take off a mailing list—they use these checks as the mailing list. Here is a great saving right on the start in the compiling of a reliable list, probably equal to the entire cost of the Service if the shipper is going to make up a list of any size and importance, and why shouldn't the shippers do this?

It costs this Organization approximately \$150,000.00 a year to furnish this book to the Members, because practically the results of the entire cost of the business are boiled down and embodied in this Credit Book—that is to say, every complaint, every collection, every adjustment, every item effecting credits or business standing of firms, in this line in the United States, that is handled by the Adjusting, Collecting, Reporting, Law, Arbitrating and other departments that has any general value to the entire Membership is really included in the book once a year, and this is supplemented every week with the current history of the trade as they make it, right at the time when you need it, in the "Weekly Credit Sheets." "Special Reports" are also furnished, but the "Blue Book" is the backbone of the Service, and for your present consideration it is this, and its benefits to you, in preparing for the coming season, that are especially emphasized.

Please write us what you are going to ship this year, how much, and what you have been; your previous methods of selling and what, if any, plans you have for the coming season. We answer every year a great many inquiries from enterprising, up-to-date growers and shippers who wish to know about our system, and how they can make better, safer and more profitable disposition of their products.

**PRODUCE REPORTER COMPANY** OGDEN BUILDING, CHICAGO  
FRUIT AUCTION BUILDING, NEW YORK CITY



## SHIP YOUR APPLES AND PEARS TO THE PURELY COMMISSION AND ABSOLUTELY RELIABLE HOUSE

# W. DENNIS & SONS LIMITED

Covent Garden Market  
LONDON

and

Cumberland Street  
LIVERPOOL

### Large Profit in Italian Prunes

J. W. French, in Portland (Oregon) Telegram

THE owner of an Italian prune orchard, well cared for, is sure to realize larger profits from his orchard than the grower of any other kind of fruit grown in the Northwest, where the same amount of labor and money is expended. I have for fourteen years been a grower of the Italian prune, and at times the business looked discouraging; however, the good orchardist has always made some money. A large majority of our prune growers will tell you that we have had years when there was an overproduction, and I agree with them; we have had years when there was an overproduction, but why? Here is the reason: When our prunes were first introduced or placed on the market, instead of being processed, packed in 25 and 50-pound boxes, as they now are by the packers, they were shipped in prune bags, gunny sacks, etc., arriving at their destination in anything but a wholesome and appetizing condition, and until we overcome the prejudice the consumer rightly formed for our product, they were not taken readily in competition with the California product, which was put on the market in fine condition. I will now say, however, that our Italian prune, by having been properly put up for the past five or six years, has grown to be the favorite among prunes.

Another reason why we can expect to realize large profits from our prune orchards is because, during the years of small profits, a great many orchardists neglected and grubbed up their orchards, so that at the present time we have about one-third less acreage than we had five years ago, and as it requires from seven to nine years to produce a bearing orchard, there is very little danger of an overproduction in the very near future. I am sure the orchardist who is familiar with the growing of both the apple and the prune will agree with me that it requires two times the expense and labor to care properly for the apple orchard and market the fruit than it requires for the prune.

A good orchard should produce six tons of undried fruit to the acre, or two of the dried product. The packers are

now offering for this year's crop eight cents per pound for the dried fruit. This will give \$400 per acre gross. To pick and cure six tons of undried fruit will cost (by owning your own drier) about \$42, leaving a net profit per acre of \$358, or \$3,580 to the owner of a ten-acre orchard. In my county (Clarke County, Washington) our prune crop should bring into the county \$1,120,000. And let me suggest to the grower to not be in a hurry to sell your prunes. Buyers are already in the field offering eight cents, but we are likely to get ten or even twelve cents by holding until

### IN THE PALOUSE COUNTRY, WESTERN IDAHO

Fine fruit farm, six miles from Moscow, Idaho. Mainly winter apples, though all fruits of temperate regions are on the place. Two-thirds of trees, about 1,000, are 12 years old, the balance younger. Crop estimated for this year 2,000 to 3,000 packed boxes. Will yield, barring accidents, 20 to 25 per cent on price. \$10,000, part cash, or \$9,000 cash. Address L. F. HENDERSON, Hood River, Oregon, or Moscow, Idaho.

**Wanted** Nurseryman out of business wishes management of orchard proposition or fruit growers' union. Experienced in selecting and preparing land, propagating and planting commercial orchards, accounting, transportation, advertising, marketing, and commission business in Chicago. Twelve years west of Rockies. Can handle a large proposition from A to Z and might take an interest. Address "A to Z," care "Better Fruit."

## There Is No Nursery

East or West that has been giving better service to its patrons than ours. In the beginning our business was largely limited to supplying the heavy local demand in the famous Wenatchee district. Our trade has grown and expanded until it now covers the entire Northwest, including British Columbia. Last season we shipped stock to nearly every state in the Union.

We grow a large and complete line of nursery stock, including fruit, shade and nut trees, ornamental shrubs, vines, roses, etc., and our customers get what they order.

### Columbia & Okanogan Nursery Co.

Wholesale and Retail

WENATCHEE, WASHINGTON

### MASON'S ADJUSTABLE APPLE BOX PRESS

Patented by A. I. Mason of Hood River, Oregon, and manufactured by CASCADE MILLS. Price \$25.00, with top cabinet for holding cardboard tops, strips, stencils, etc., or \$18.50 without top cabinet.

We make other presses from \$7.00 to \$10.00.

R. B. BRAGG, Proprietor, Hood River, Oregon

### CHERRY CITY NURSERIES

We grow a complete line of fruit and ornamental stock. We select our buds and scions from choice bearing trees. We exercise care in keeping our stock true to name. We ship our trees properly graded. We quote prices that are right. We have pleased others; we can please you. Give us a trial.

J. H. LAUTERMAN

AGENTS WANTED

Rooms 1 and 2 Lauterman Building

SALEM, OREGON



CONTRACTORS FOR FENCE CONSTRUCTION

THOS. C. SOURBEER, Manager

224-225 Lumber Exchange

Main 5645

We Fence Anything from a  
Lawn to a Railroad

**NATIONAL  
RABBIT-TIGHT FENCE**

TURN THE RABBITS

PORTLAND, OREGON



later in the season. One thing I have observed in years past when I have gone East to market my fruit, that it does not make any difference what the packer pays here, whether he pays three cents per pound or ten cents, when the consumer buys of the retailer in the East the price to him is just the same.

There is no reason why the grower should contract his prunes at this early date at anything less than ten cents per pound, for, unlike other years, there is not a pound of hold-overs of last year's crop to be had at any price. This is the first time, I think, in ten years there has not been millions of pounds unsold from the previous year's crop, which were placed on the market at a ruinously low price, which, of course, established the price of the new crop. I believe some of our small growers who do not fully understand the prune situation have already contracted this year's crop at six cents.

### Co-Operation

The Western Fruit Jobbers' Association of America is conducting an extensive campaign for co-operation between shippers and receivers of fruits and the transportation companies. Following is a copy of a recent letter circulated by them: "Since mailing our first circular on the above subject we thought it advisable to issue another one in order to call the attention of the shippers of perishable freight, especially to the inspection of cars before loading. The railroads have shown their willingness to co-operate with members of this association in the prompt handling of claims, and as the interests of the railroads and shippers are almost identical, therefore let us co-operate with them and secure the most efficient service possible in the handling of perishable freight. Buyers should insist that shippers load the commodity in the proper manner to secure the best refrigeration, also make a rigid inspection of the car before loading. See that the doors fit tightly, drain pipes properly opened, whether ice plugs are in or out and the car is otherwise in physically good condition to carry the load safely, provided proper refrigeration and service is furnished. Special attention should be given to see that the car does not contain any lime, acid or fertilizer, because perishable freight loaded in such cars would be detrimental to the commodity so loaded. We would further recommend that when a car is being loaded the shipper examine the contents of the car and a record of the inspection be made. When a shipment arrives in a damaged condition the receiver should secure proper inspection record as outlined in circular number one of March 25. If the carrier wishes the receiver to handle the car for their account secure written order before doing so. This would result in less damage to the carrier and shipper and would prevent the market being demoralized. It would also promote a

# Big Fruit Crops

Don't worry us, for we're accustomed to distributing large quantities of Western Fruits of all kinds.

While we have already quite a number of contracts with associations and car lot shippers, our ever-widening trade outlets, both in domestic and foreign markets, make it possible for us to sell apples or any other fruits to best advantage.

We stand on our long record for *making money for our clients* and for giving them a square deal.

Keep us in mind and rest assured we shall be glad to hear from you about marketing your fruits.

If you don't need us today, you may tomorrow.

**Gibson Fruit Company**  
69 W. South Water Street  
Chicago, Illinois

## TREES AND SMALL FRUITS

**That Bring Quick, Heavy and Positive Results**

The western section of Oregon where our stock is grown has no equal, considering soil and climatic conditions. We offer a whole-root, non-irrigated tree with a root system that produces what we say above. It is root system that counts with the young tree, and ours make a remarkable growth in irrigated or non-irrigated sections.

**Our Stock Spells Success in Every Locality**

Our small fruits are large, thrifty, well-rooted transplants. For quick results this is the kind to plant every time.

**Italian Prunes**

We have a good stock, and they are fine, vigorous trees. Orders should come in immediately. Prunes everywhere are short this season.

**SALEM NURSERY COMPANY**

416-17 U. S. National Bank Building

SALEM, OREGON

Live salesmen can make money selling our stock  
ASK FOR OUR CATALOGUE



WE SPECIALIZE IN  
**APPLES**

**Ridley, Houlding & Co.**

COVENT GARDEN, LONDON

*We Want to Represent the Growers of*

**BETTER FRUIT.** We know that our  
**BETTER METHODS** of selling will bring  
**BETTER RESULTS**

*A Trial Solicited*

*All Shipments Receive Personal Attention*

better feeling between the shipper, receiver and carrier. The tendency of the law is to affix a greater degree of liability upon the carrier as the science of transportation advances. While it is the duty of railroads to settle all lawful claims promptly it is also the duty of the claimants to see that their claims are just, and when filed are in the proper shape and accompanied by the necessary papers to establish the claim. By following the above rules and suggestions your grievances would be cut down to a minimum and would be given prompt attention by the carriers. The shippers generally are beginning to realize the importance of co-operating with the carriers, and let the shippers and receivers of perishable freight start the good work outlined in the two circulars on co-operation."

### Clarke is Prune County

More than half of the prune trees in the State of Washington are in orchards in Clarke County, according to a report of A. A. Quarnberg, district horticulture inspector of Clarke, Skamania, Cowlitz and Klickitat Counties. And in addition to this, more prune trees have been set out during the last year than have been for many years. A census of fruit trees in the county reveals that there are more than 800,000 fruit trees, and two-thirds of these are prune trees. A full crop of prunes would bring about \$750,000 to the county, but this year it is a failure.—Oregonian.

### Spokane Industrial Fair

**T**HE larger state and district fairs of late years have a two-fold purpose—to emphasize the educational and instructive features of their exhibits and to encourage constant improvement in the character of the displays shown, so that this year's loser may be next year's prize-winner. With this object in view, the Spokane Interstate Fair, September 30 to October 6, 1912, has revised its premium list very thoroughly, increasing the amounts in many instances and adding many new classifications. This is especially true in the horticultural section, in which prizes aggregating \$1,603.50 are offered; and because of the generosity of the premiums and the number of new vari-

eties admitted a long entry list is expected, and it is confidently expected that the fruit display will greatly excel, both in quality and quantity, any others previously shown in Spokane.

King Apple is easily the leader in this section, capturing the lion's share—\$908.50—of the premiums. While 181 separate varieties are listed, it is recommended that preference be given to the twenty-two varieties selected by the Washington State Horticultural

Society as being the most important commercially. Displays of pears are offered \$269.50, and of grapes \$166. Peach growers will share \$93.50 and exhibits of plums and prunes \$89. Quinces will draw \$21.50, and a miscellaneous class, including apricots, nectarines and nuts, aggregates \$55.50. A very prominent feature will be the prizes for the best county and district agricultural displays, totaling the sum of \$2,250. These are given jointly by

## Astoria and North Beach

Via the delightful Columbia River Route on

The Steamers



**T. J. POTTER**  
**HASSALO and**  
**HARVEST QUEEN**

**FROM ASH STREET DOCK**

**STEAMER "T. J. POTTER"** leaves Portland at 10:30 p. m. daily (except Sunday), arriving Astoria 6:00 a. m. and Megler at 7:30 a. m. Returning leaves Astoria daily except Sunday and Monday at 7:00 a. m., Megler at 9:30 a. m., arriving Portland 4:30 p. m. On Sunday, leaves Astoria 7:00 a. m., Megler 9:00 p. m., arriving Portland at 5:30 a. m. Monday.

**STEAMER "HASSALO"** leaves Portland daily (except Saturday and Sunday) at 8:00 a. m., Saturday at 1 p. m., arriving Astoria 1:30 p. m., Megler 2:15 p. m. On Saturday arriving Megler 6:30 p. m. Returning leaves Megler daily except Saturday and Sunday at 2:45 p. m., arriving Portland 10:00 p. m. Sunday leaves Megler 9:00 p. m., arriving Portland 5:30 a. m.

**STEAMER "HARVEST QUEEN"** leaves Portland daily (except Saturday and Sunday) at 8:00 p. m., Saturday at 10:00 p. m., for Astoria and way landings. Returning leaves Astoria daily except Sunday at 7:00 a. m., arriving Portland 6:00 p. m.

**EXCELLENT RESTAURANT SERVICE (Meals a la carte)**

Trains meet all boats at Megler for North Beach points

Astoria .....	\$ 1.50	
North Beach {	Saturday-to-Monday tickets .....	3.00
	Season tickets .....	4.00
	Five-Ride Round-trip tickets .....	15.00
One-day River Trip, Portland to Megler and return....	2.00	
Stateroom reservations can be made at Ash Street Dock or		

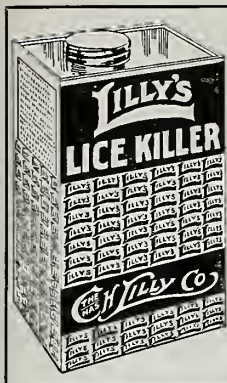
Stateroom reservations can be made at Ash Street Dock or

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Box Apples  
and Pears

the fair and the Spokane Chamber of Commerce, and a carload of the winning displays will be taken to the International Dry Farming Congress at Lethbridge, Alberta, in November.

The amusement features of the fair have not been neglected and an unusually fine list of attractions has been secured, including Hitt's "Conquest of Mexico by the Spaniards," which will be the principal feature of the night shows. Extensive improvements have been made on the grounds and nothing that can add to the comfort or pleasure of the public has been omitted. The management of the fair is confident that their exhibition, which reached sixth place in the United States last year in point of attendance and general excellence, will this year attain fifth, and possibly fourth, rank.—Contributed.

## Just Prunes

Through selection of the right variety of tree, intelligent cultivation, careful picking and drying the Oregon prune has gained a world-wide reputation, and the demand is greatly in excess of the supply. From a commercial point of view the prune is at this time the leader in deciduous fruits grown in the valley and is a source of great income to the growers. The three principal varieties grown are the Italian, French or Petite and the Silver. The best results are secured from the Italian variety, which is produced to even greater perfection in size, flavor and quality than in its native haunts in Italy. This Italian or Oregon prune is a large fruit of the plum-family. When ripe ten to fourteen prunes weigh a pound. Artificial evaporation is used to dry the fruit. The yield per acre is from 200 to 250 bushels in the older orchards. One hundred bushels of the green fruit make a ton of the cured product, which sells at from \$80 to \$100, according to the grade. The cost of cultivation does not exceed the cost of producing a crop of grain. The prune harvest begins about the middle of September and continues for thirty days. The work of picking, dipping, rinsing, spreading, grading, cleansing, etc., gives employment to thousands of men, women and children. After dipping in boiling water the fruit is rinsed in cold water and then spread on trays. It next goes into driers, where evaporation takes place. After thirty to forty hours in the kiln the fruit is hauled to the packing establishments, where, after grading, it is thoroughly cleansed and sterilized by steam, and is then packed in boxes of different size for the market.—Salem Booklet.

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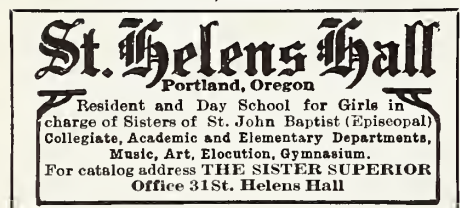
Stands for better farming and better crops. You use less seed, but better tillage. It teaches you how to breed and select seed, how to conserve moisture so that your crop will not be ruined in the hot, dry spell, and how to mature a crop on a small amount of rainfall.

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## Oregon Agricultural College

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## Fairs of the United States and Canada

We print below a list of the principal exhibitions and fairs to be held this fall:

- Aug. 12-17—Vancouver Exhibition Ass'n, Vancouver, B. C.
- Aug. 12-17—Blue Grass Fair, Lexington, Kentucky.
- Aug. 19-23—Cambridge Valley Agricultural Society, Cambridge, New York.
- Aug. 19-23—Lethbridge Exhibition, Lethbridge, Alberta.
- Aug. 20-24—Lincoln County Fair, Toledo, Oregon.
- Aug. 20-24—Hardin County Fair, Kenton, Ohio.
- Aug. 22-30—Iowa State Fair, Des Moines, Iowa.
- Aug. 21-Sept. 3—Quebec Provincial Exhibition, Quebec.
- Aug. 26-30—Interstate Fair Ass'n, Bozeman, Montana.
- Aug. 26-31—Ohio State Fair, Columbus, Ohio.
- Aug. 26-31—Portland Fair & Livestock Association, Portland, Oregon.
- Aug. 28-30—Linn County Fair, Scio, Oregon.
- Aug. 27-30—Trans-Mississippi Commercial Congress, Salt Lake City, Utah.
- Aug. 31-Sept. 7—Canada's Great Eastern Exhibition, Sherbrooke, Quebec.
- Sept. 2-5—The Great Allen County Fair, Lima, Ohio.
- Sept. 2-6—Big Timber Exposition, Big Timber, Montana.
- Sept. 2-6—Nebraska State Fair, Lincoln, Nebraska.
- Sept. 2-6—Indiana State Fair, Indianapolis, Indiana.
- Sept. 2-6—Montgomery County Fair, Dayton, Ohio.
- Sept. 2-6—West Virginia State Fair, Wheeling, W. Va.
- Sept. 2-7—Oregon State Fair, Salem, Oregon.
- Sept. 2-7—Minnesota State Fair, Hamline, Minnesota.
- Sept. 2-7—Connecticut Fair and Races, Hartford, Conn.
- Sept. 2-7—Wallowa County Fair, Enterprise, Oregon.
- Sept. 3-6—Sweet Grass County Fair Association, Big Timber, Montana.
- Sept. 3-7—Maryland State Fair, Timonium, Maryland.
- Sept. 5-7—Granger District Fair, Cottage Grove, Oregon.
- Sept. 5-15—Santa Clara County Fair, San Jose, California.
- Sept. 5-16—Central Canada Exhibition, Ottawa.
- Sept. 7-13—Northern Illinois Fair, Streator, Illinois.
- Sept. 7-14—Exposition, Everett, Washington.
- Sept. 9-13—Kansas State Fair, Topeka, Kansas.
- Sept. 9-13—South Dakota State Fair, Huron, S. Dakota.
- Sept. 9-14—King County Fair, Seattle, Washington.
- Sept. 9-14—Livingston Exposition, Livingston, Montana.
- Sept. 9-14—Kentucky State Fair, Louisville, Kentucky.
- Sept. 9-14—Clarke County Fair, Vancouver, Washington.
- Sept. 9-14—West Michigan State Fair, Grand Rapids.
- Sept. 9-14—New York State Fair, Syracuse, New York.
- Sept. 10-13—Park County Fair Ass'n, Livingston, Montana.
- Sept. 10-14—Wisconsin State Fair, Milwaukee, Wisconsin.
- Sept. 11-14—Southern Oregon District Agricultural Society, Eugene, Oregon.
- Sept. 11-14—Yonchey Valley Fair Ass'n, Dayton, Wash.
- Sept. 11-14—Multnomah County Fair, Gresham, Oregon.
- Sept. 11-14—Union County Fair, La Grange, Oregon.
- Sept. 12-15—Clatsop County Fair, Gearhart, Oregon.
- Sept. 14-20—Kansas State Fair, Hutchinson, Kansas.
- Sept. 14-21—California State Fair, Sacramento.
- Sept. 16-21—Northern Montana Fair Ass'n, Great Falls.
- Sept. 16-21—Walla Walla Co. Fair, Walla Walla, Wash.
- Sept. 16-21—Interstate Livestock Fair, Sioux City, Iowa.
- Sept. 16-21—Michigan State Fair, Detroit, Michigan.
- Sept. 16-21—Colorado State Fair, Pueblo, Colorado.
- Sept. 16-21—Tennessee Fair Ass'n, Nashville, Tennessee.
- Sept. 16-21—Vermont Fair Ass'n, White River Junction.
- Sept. 18-20—San Luis Valley Fair, Alamosa, Colorado.
- Sept. 18-21—Olympic Peninsular Fair, Port Townsend, Washington.
- Sept. 18-21—Baker County Fair, Baker, Oregon.
- Sept. 19-21—Second Annual Grape Carnival, Kennewick, Washington.
- Sept. 21-25—Bonner County Fair, Sand Point, Idaho.
- Sept. 23-27—Latah County Fair, Moscow, Idaho.
- Sept. 23-28—Washington State Fair, North Yakima, Wash.
- Sept. 23-28—The Round Up, Pendleton, Oregon.
- Sept. 23-28—Montana State Fair, Helena, Montana.
- Sept. 23-28—Interstate Livestock Show, St. Joseph, Mo.
- Sept. 23-28—Tri-State Fair, Memphis, Tennessee.
- Sept. 23-28—Colorado Interstate Fair, Denver, Colorado.
- Sept. 24-28—Malheur Agricultural Ass'n, Ontario, Oregon.
- Sept. 24-27—Harvest Carnival, Tekoa, Washington.
- Sept. 24-27—Wyoming State Fair, Douglas, Wyoming.
- Sept. 24-27—Interstate Fair, LaCrosse, Wisconsin.
- Sept. 24-Oct. 5—Oklahoma State Fair, Oklahoma City.
- Sept. 25-28—Clackamas County Fair, Canby, Oregon.
- Sept. 25-28—So. Oregon District Agric. Fair, Ashland.
- Sept. 26-28—Pumpkin Show, Junction City, Oregon.
- Sept. 26-28—Raymond, Washington.
- Sept. 28-Oct. 4—Missouri State Fair, Sedalia, Missouri.
- Sept. 30-Oct. 4—Interstate Fair, Trenton, New Jersey.
- Sept. 30-Oct. 4—Rogue River Valley Fair Ass'n, Medford, Oregon.
- Sept. 30-Oct. 5—Spokane Interstate Fair, Spokane, Wash.
- Sept. 30-Oct. 5—Southwest Washington Fair, Centralia.
- Sept. 30-Oct. 3—Twentieth National Irrigation Congress, Salt Lake City, Utah.
- Sept. 30-Oct. 5—Utah State Fair, Salt Lake City, Utah.
- Sept. 30-Oct. 5—Fresno Exhibition and Races, Fresno, Cal.
- Oct. 1-4—Canyon County Fair, Caldwell, Idaho.
- Oct. 1-4—Brockton Fair and Horse Show, Brockton, Mass.
- Oct. 1-4—Second East Oregon District Agricultural Society, The Dalles, Oregon.
- Oct. 1-5—Puyallup Valley Fair, Puyallup, Washington.
- Oct. 3-12—Alabama State Fair, Birmingham, Alabama.
- Oct. 4-12—Illinois State Fair, Springfield, Illinois.
- Oct. 7-12—Idaho Inter-Mountain Fair, Boise, Idaho.
- Oct. 7-12—Leviston-Clarkston Fair, Lewiston, Idaho.
- Oct. 7-12—Hanford Exhibition, Hanford, California.
- Oct. 7-12—American Royal Livestock Show, Kansas City.
- Oct. 7-12—Muskegon Fair Ass'n, Muskegon, Oklahoma.
- Oct. 8-10—Stevens County Fair Ass'n, Colville, Wash.
- Oct. 8-11—Flathead County Fair, Kalispell, Montana.
- Oct. 9-11—The Eastern Oregon Agricultural Society, Mayville, Oregon.
- Oct. 12-27—Texas State Fair, Dallas, Texas.
- Oct. 14-19—Whitman County Fair, Colfax, Washington.
- Oct. 14-19—Los Angeles Exhibition, Los Angeles, Cal.
- Oct. 14-19—Great Northern Carolina State Fair, Raleigh.
- Oct. 14-19—Northwestern Livestock Show, South St. Paul, Minnesota.
- Oct. 14-21—Los Angeles Harness Horse Ass'n, Los Angeles.
- Oct. 15-17—Tri-County Fair, Condon, Oregon.
- Oct. 15-25—Georgia State Fair, Macon, Georgia.
- Oct. 16-19—Crook County Fair, Trinitree, Oregon.
- Oct. 21-26—San Diego Exhibition, San Diego, California.
- Oct. 21-26—Mississippi State Fair, Jackson, Mississippi.



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- Oct. 17-26—International Dry Farming Congress, Lethbridge, Alberta.
- Oct. 30-Nov. 6—Louisiana State Fair, Shreveport, La.
- Nov. 4-9—Arizona State Fair, Phoenix, Arizona.
- Nov. 4-9—Indiana Apple Show, Indianapolis, Indiana.
- Nov. 12-23—Northwest Land Products Show, Minneapolis.
- Nov. 15-Dec. 7—New York Land Show, New York City.
- Nov. 18-23—Northwest Land Products Show, Portland.
- Nov. 23-Dec. 8—U. S. Land and Irrig. Exposition, Chicago.
- Nov. 30-Dec. 7—International Livestock Expo., Chicago.
- Dec. 9-13—Northwest Fat Stock Show, Lewiston, Idaho.
- Jan. 13-15-18—Western Fruit Jobbers' Ass'n, New Orleans.

### BRITISH COLUMBIA FALL FAIRS FOR 1912

- Sept. 18-20—Kamloops.
- Sept. 23-27—Grand Forks, Agr. Ass'n, Grand Forks.
- Sept. 23-24—Vernon.
- Sept. 23-28—Nelson Fruit Fair, Nelson.
- Sept. 24-28—Provincial Fair, Victoria.
- Sept. 25—Nicola.
- Sept. 26-27—Kelowna.
- Sept. 27-28—Salmon Arm.
- Sept. 28—Penticton.
- Oct. 1-5—Provincial Exhibition, New Westminster.
- Oct. 3-4—Vernon Horse Show, Vernon.
- Oct. 4-5—Arrow Lakes.
- Oct. 8-10—Revelstoke.
- Oct. 16-17—Armstrong.
- Oct. 22-23—Okanagan Central Fruit Show, Vernon.
- Oct. 30-Nov. 1—Summerland.

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Carlton, Oregon

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Famous Hood River Valley  
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40 inches long Price \$1.00

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Hood River, Oregon



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## FOR THE BEST APPLE LAND IN THE BEST APPLE SECTION IN THE UNITED STATES

Bearing orchard of 120 ACRES, half consisting of Black Twig, York Imperial, Albemarle Pippin and Ben Davis, in full bearing. Other half, Grimes, Bonum, Jonathan, Stayman, York Imperial, etc., now coming in. Will pay dividends from now on.

200 ACRES now in blue grass and meadow, stocked with best of cattle, horses, sheep and hogs. Available for planting at once.

15 ACRES planted to apples last spring. Peaches and all other fruits do extra well, the land being of good quality and also adapted to growing all grains and grasses, including corn and alfalfa.

Balance in timber—380 ACRES in all. Can be subdivided.

NET PROCEEDS for fruit on the trees in the older half of orchard, \$9,000.00 one year. This orchard promises a better yield for 1912 crop. Younger half also promises a good many apples this season.

New dwelling, with bath, hot and cold water; two tenements; large new barn; implement shed; pickers' quarters; ice and poultry houses.

Located on the slope of the Blue Ridge Mountains, 1,000 feet up; protected from severe winds by wooded hills; well watered by perennial springs and brooks—the best of water. Overlooking the beautiful and historic Shenandoah Valley. Railroad adjacent to orchard. Three hours from Washington and only five to ten hours from all the large Eastern cities; at the threshold of the best apple markets of Southern manufacturing and seaboard cities.

No need of irrigation or smudge pots, with their attendant cost and labor. Beautiful country and grand scenery. Low and short freight hauls. Labor plentiful. No frost-insurance charges.

ALL THIS with low-priced land that grows all the fruits, second to none in quality.

You are invited to come and see the fine long-lived trees that promise 40 to 50 bushels of apples each. We can also show you New York account of sales for Albemarle at \$6.50 per barrel, when Western Newtowns were selling in same market at 80 cents to \$1.40 per box.

### WRITE FOR PRICES AND FURTHER PARTICULARS

Also a place of 900 acres, containing 10,000 apple trees of best varieties, and 2,000 peaches from 4 to 11 years. Best of apple land, improved with necessary buildings and residence.

Another, 200 acres, with 1,200 bearing apple trees and 3,000 from 1 to 2 years old. Also improved with residence and necessary buildings.

## JOHN W. WOOD, Linden, Virginia

H. E. VAN DEMAN

Pomologist

3630 13th Street, N. W.

Washington, D. C., May 31, 1912.

My Dear Friend Wood:

Your letter is here and finds me just home from a trip looking over some large orchards in Western Maryland.

I know the Weaver orchard at Linden, Virginia, very well and was all over it while Mr. Weaver was living. It is in a most excellent climate and soil for apples and the land on which this orchard is located is exceptionally well suited for it, not being steep and yet well drained. And the location on the railroad is all that anyone could desire for convenient transportation. I tried to get land in that region for planting an apple orchard some years ago, but no one seemed to be willing to sell at a price that was low enough, because it was paying well for the ordinary farming for which it was used.

I would like to visit you, but have so many calls on my time that I cannot afford to spend any of it visiting as I would wish to do. Would like to go up in the mountains with you and see the young orchard, too. I have been in Patrick County lately, looking over the orchards there, which are looking well but not bearing heavily this year because of rainy weather at blooming time.

Yours fraternally,

H. E. Van Daman.

You can quote what I say about your region, orchard, etc.

## A Word for the Plum Family

Dr. O. P. S. Plummer before Oregon State Horticultural Society

I HARDLY know what to say to you. I thought I had some ammunition prepared to use on this occasion, but by the time Dr. Cardwell and Himes and Settlemeier and the governor got through there was not much left. As those names of old-time friends were mentioned they brought up many recollections. I think I knew every man of those whose names were read in connection with that first organization; they were a fine lot of men, every one of them dead except Dr. Cardwell. We are saving him so as to keep a sample, and he is a good sample. As those other later names were mentioned I think Mr. Settlemeier said that he and Dr. Cardwell were all that were left of those who used to meet, but there are a few others still in the flesh. Colonel Dosch would be here with us today were he not at home sick. We had a fine lot of men, the doctor here was our president for twenty years, and he was a good president, faithful, zealous and diligent in this society, and year after year he was unanimously re-elected. I had the honor at one time of being vice-president, and I thought the next year they would select me for president—but no, we could not get along without Dr. Cardwell (laughter); we had to have him. We all learned to love him, and while we cherish the memory of the dear ones who have left

us and hold them in pleasant recollection, our love should be the warmer toward the dear ones that are left with us, and if we have any bouquets we should scatter them around where they will grow a whole lot better than on the graves of the departed. I do not think we can spoil Dr. Cardwell by flattery; he and Settlemeier are not the kind of men that will be flattered much; they are solid, faithful, successful business men, carrying on an extensive business.

Now you have been getting solid matter, a great deal of useful information, but some of the light things have come to my mind. I well remember a story that E. L. Smith, the grand old man, used to tell at our meetings, about the time the proprietor of the Garden of Eden became incensed at the conduct of his tenants and expelled them. "Eve," said Mr. Smith, "dressed herself in the best garments she possessed, and as they walked forth from the garden she took the hand of her husband, turned her head jauntily over her shoulder and said to the proprietor he could keep his orchard; she wouldn't give A-dam for all the apples he had in it, and from that time it has been decreed that mankind should work for a living."

I think that is a good idea. We need to work for a living; we come here and

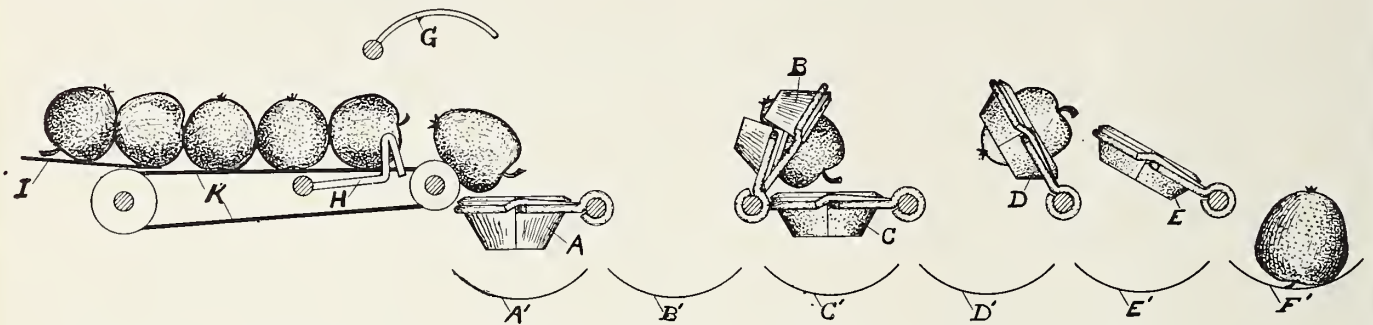
work our brains and get ideas to help us work better with our bodies. Take anybody who does not have to work for a living, what is he going to amount to? What can he amount to if not employed with something useful?

In connection with our fruit affairs, it seems to me that these meetings have not done justice to the plum family. We used to have a great deal to say about the plum family, or prunes; a few years ago in fact it was nearly all prunes instead of apples; Italian prunes are certainly a desirable fruit. The plum family is not all dead yet. Let us go ahead and raise apples, good apples; let us give Oregon all the reputation we can with our apples and peaches and pears, that is all very well, but do not let us forget the prunes.

As to market prices, we have heard something of high prices. I remember very well Joe Strowbridge told me he bought apples in Oregon City in 1853 for \$5 a bushel, boxed them and shipped them to San Francisco and sold them for \$60 a bushel. There was a very reasonable middleman's profit for you, not to put it mildly; but when William F. Fliedner told me that he paid \$2.50 for an apple in 1853, and believed it was one of the same apples that S. shipped I thought there was another middleman coming in for his share. So I think the fruit raisers—the apple raisers—should combine and plan so that the producers get the larger proportion of the returns.



# Schellenger Fruit Grading Machine



Have you seen the endorsements of those who used the Schellenger Fruit Grading Machine during the 1911 packing season? We publish a list of them in our free book entitled *Modern Methods of Grading and Packing Fruit*. Every machine gave entire satisfaction because they did the work with mechanical accuracy and made money for their owners.

You can absolutely rely upon getting these same results for yourself. No doubt is involved. **WE GUARANTEE IT.**

*This machine will put your orchard on a paying basis  
Hadn't you better look them up?*

**EVENTUALLY YOU WILL WANT OUR ADDRESS**

## Schellenger Fruit Grading Machine Co.

References: Our customers

OGDEN, UTAH

### Oregon Prunes Market Constantly Broadening

W. C. Tillson, in Salem (Oregon) Statesman

**T**HE prune industry of Western Oregon has now become one of the leading and prominent industries, with every indication of its becoming the leading industry, particularly in the Willamette Valley. The industry is a comparatively new one, it being only ten or twelve years since they were produced in any commercial quantity, and for several years there was practically no market for the output, as the fruit was unknown and, being very different from the California or French prune, the market for it had to be established, which is a slow process.

But wherever the Italian prune has been introduced it has made friends, and the demand for the fruit has been gradually increasing from year to year and markets widening until today the demand for the fruit appears to be greater than the supply. It is safe to say that the markets of the world would have taken last year probably four times the amount produced, could the fruit have been supplied, and this at fairly remunerative prices to the grower. Today we have in addition to the active consumptive demand all over the United States a very active demand

for our product all over Europe. Last season a very large percentage of our crop was sent there, with most satisfactory results to the consumer, and everything now points to a continued heavy export demand.

The acreage for Italian prunes in this portion of the state is rapidly increasing. It is a much safer industry than the handling of fresh fruit, for the reason that the product can be carried indefinitely, does not have to be sold and shipped immediately when ripe, as is the case with fresh fruits. It can be shipped either by rail or water, in sacks or boxes, and to all parts of the world without danger of freezing.



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## Apples for American and Foreign Markets

Woodall & Co., Liverpool

Agent for  
M. Isaacs & Sons, Ltd., London

Thomas Russell, Glasgow

Also Leading Apple Receivers in other markets

SHIPMENTS FORWARDED FROM BOSTON OR NEW YORK

Market quotations and full particulars on application.

Correspondence invited.

Dried prunes are a food product nearly as stable as wheat and prices are not subject to the violent fluctuations that often occur with fresh fruits. The possibilities of phenomenal profits are not so great as sometimes occur in fresh fruits, such as pears, apples and cherries, but the industry is much safer and more stable and not nearly

so speculative. There is no branch of agriculture that has had a better average profit per acre since the prune industry commenced than prunes, and the outlook for future prices and future profit to the grower was never brighter.

The prune is a fruit that can be grown only in a limited area, while

apples, pears, cherries and many other fresh fruits can be grown practically all over the world, so that the danger of overproduction is almost entirely eliminated. The cultivation of an orchard involves but very little more expense than the cultivation of the same area of grain. The pruning, spraying and curing of fruit, of course, involves considerable labor and expense, but that is true of any crop that is grown.

LESLIE BUTLER, President  
TRUMAN BUTLER, Vice President  
C. H. VAUGHAN, Cashier

Established 1900

## Butler Banking Company

HOOD RIVER, OREGON

Capital fully paid - - - \$100,000

INTEREST PAID ON TIME DEPOSITS

We give special attention to Good Farm Loans

If you have money to loan we will find you good real estate security, or if you want to borrow we can place your application in good hands, and we make no charge for this service.

THE OLDEST BANK IN HOOD RIVER VALLEY

## LADD & TILTON BANK

Established 1859

Oldest bank on the Pacific Coast

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Capital fully paid - - - - - \$1,000,000

Surplus and undivided profits - - - 800,000

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Edward Cookingham, Vice President

W. H. Dunckley, Cashier

R. S. Howard, Jr., Assistant Cashier

J. W. Ladd, Assistant Cashier

Walter M. Cook, Assistant Cashier

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Accounts of banks, firms, corporations and individuals solicited. Travelers' checks for sale, and drafts issued available in all countries of Europe.

## New Residents

We are always pleased to extend courteous assistance to new residents of Hood River and the Hood River Valley by advising them regarding any local conditions within our knowledge, and we afford every convenience for the transaction of their financial matters. New accounts are respectfully and cordially invited, and we guarantee satisfaction. Savings department in connection.

**Hood River Banking and Trust Company**  
HOOD RIVER, OREGON

## The First National Bank

Hood River, Oregon

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J. W. HINRICH, Vice President  
E. O. BLANCHARD, Cashier  
V. C. BROCK, Assistant Cashier

Savings Department  
Safety Deposit Boxes

Capital and Surplus, \$127,000  
Total Assets over \$600,000



# APPLES and Other Fruits

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123 W. So. Water St., CHICAGO

### EXPERT MARKETING AGENTS

#### The Prune Industry from the Packer's Standpoint

J. T. Brumfield, Portland, Oregon, before the Oregon State Horticultural Society

I AM glad to be here and have the opportunity of addressing you on the subject of "The Prune Industry From a Packer's Standpoint." When your president asked me to define a subject I wished to speak on I told him my remarks would be general and whatever may come to my mind (not of particular interest), but of help to both the grower and packer. Every commercial era has its dominant factor or prevailing characteristics. The method of marketing prunes fifteen years ago would be an interesting commercial relic today. It was not so much a matter of commercial cheapness as in some other lines at that time, but solely from a lack of knowledge how to prepare the prune for market. Goods were sent to the Eastern market in white cotton bags, many of them half dried, and the best would arrive looking as though they had passed through the killing process of a slaughter house. A party told me he could trace a car of prunes in the Chicago freight yards to its warehouse by the juice that had leaked through and streaked the roadbed. I only call your attention to this so as to point out clearly the difference then and the present modern method of handling these goods. I refer now to the product of a well governed, thoroughly equipped packing house. There is no place for any other kind. The industry is better off without the dirty, careless packer, running a business loose at both ends. He does himself no good and is a detriment to his community.

Possibly all of you do not know just how prunes are prepared for the market and how nice, clean and wholesome they are. Now for a few minutes I want to show you through a modern prune packing plant, a spacious building equipped with several pieces of machinery adapted to do the work of grading, processing, boxing, etc. The prunes are first graded into the several sizes, then they pass through a large revolving drum filled with a continuous flow of high-pressure steam. As they pass out of this a flow of boiling water washes off every particle of dirt; in fact they are now as clean as the

surgeon's sterilized supplies; sanitary in every respect and a delicious, healthy fruit. These are packed in 10, 25 and 50-pound boxes, lined with fancy paper, protected by sheets of parchment. We have now practically a manufactured article and not the sticky, sometimes dirty, prune. They can be handled without soiling the hands; a package that will keep without spoiling or loss to the dealer; an attractive article to the consumer, and from the output of a packing house such as I have described, out of 4,000,000 to 6,000,000 pounds there is scarcely a complaint—none from the honest dealer, never one from the consumer. Instead of rejections and complaints we now have letters of commendation and praise. In order now to accomplish this we must have sound, well-cured fruit; so this leads up to the question of how to dry prunes. We are packers, also jobbers, and do not know

how to dry, but do know how not to dry them. A few words on this subject is sufficient.

No packer can put out a first-class article or one that will keep with partially dried prunes or one that is dried before it has attained its proper ripeness, nor from fruit that has passed a

A Reputation to Sustain

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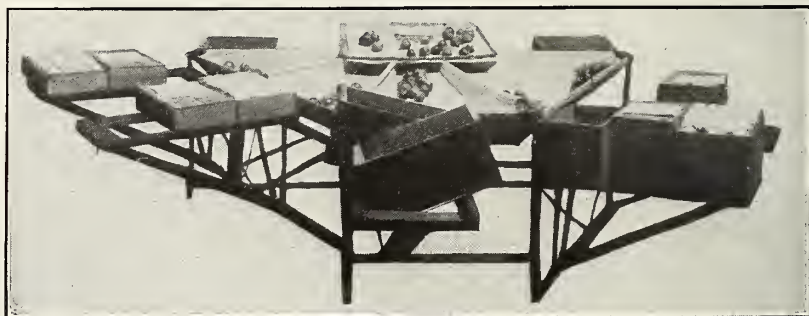
Clarkston, Washington

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All stock budded from bearing trees, fruit and ornamental

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FOR ALL KINDS OF FRUIT

Write to-day for particulars of how to better your pack at a less cost per box

**THE HARDIE MANUFACTURING CO.** 49 N. Front Street  
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**For Shippers and Associations**  
**Fruits and Produce**  
**Indianapolis, Indiana**

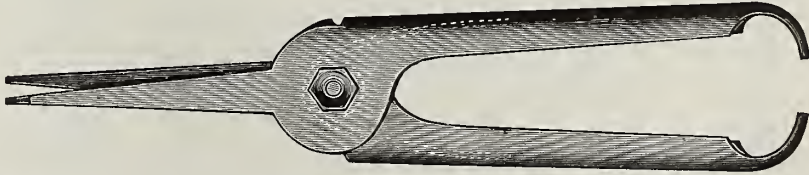


sound condition. In the State of Ohio recently a dealer was prosecuted and sentenced to pay a fine for selling dried apples that were misbranded and did not comply with the national pure food laws. They were branded "Choice evaporated apples." On examination they were found to be packed from common dried stock, not properly trimmed, and containing dried pieces from worm-eaten apples. I believe this decision is coming pretty close to some prunes that are put on the market. The apple cannot conceal its imperfection; the prune does. It takes an expert to detect a prune that is not properly cured or one that is dried from unsound fruit. A chemist may be required. The Department of Agriculture may not attempt to regulate this, but it is just as much a violation to offer for sale a prune cured from unsound fruit as it is to can beef from deteriorated meat. It is as much a crime to offer for sale prunes with mould and in a fermenting state as to sell jelly colored with coal-tar dyes. Aside from the legal view, for the good of the industry, nothing but sound, well-cured fruit should ever enter the market. Any article of food must suit the consumer, otherwise it is a failure. The consumer after all is the great advertising medium. A better class of goods in all lines is being used; the consuming public is better educated as to the merits of what they eat than ever before. I urge the best dried prunes that care, intelligence and sincerity can produce. I am glad to say in this respect that a great improvement has been made. We had less poorly dried prunes the present season than ever before. The day is not far off when every lot of prunes will be bought on quality and merit.

I have been requested to say something on the custom of making contracts before the fruit is dried. Time will not permit me to discuss this to even a partial conclusion. This custom of trading has been a part of legitimate commerce; a large volume of business is now done on this method covering a great many commodities. The custom has many advantages for the producer. It places the dealer in a position to do business in advance of delivery and many times stimulates values, when if

**O.E. OLSEN**  
**LITHOGRAPH CO.**  
**FRUIT LABELS**  
FOR BOXES, CANS, BOTTLES, ETC.  
STOCK AND SPECIAL TRADE MARK DESIGNS  
330 JACKSON ST. **SAN FRANCISCO.**  
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**HOOD RIVER, OREGON**  
**WHOLESALE AND RETAIL**  
**Lath, Shingles, Moulding and Slab Wood**  
**Berry Crates and Fruit Packages of all kinds**  
**Apple Boxes—California and Oregon sizes**



**Fruit Thinning Shears** Improved Pattern  
LET US BOOK YOUR ORDERS NOW TO INSURE  
PROMPT DELIVERY  
40 cents each, \$3.90 per dozen, postpaid  
**E. A. FRANZ CO., HOOD RIVER, OREGON**



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**On  
An Island Thirty  
Miles At  
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**THE PIONEER LINE**

**Northern  
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"Away off the coast of Massachusetts on an island 30 miles at sea I met a man who was talking about your train service."

**THAT'S** why YOU ought to take this Standard Railway of the Northwest when you go back and forth across the country.

We're continually trying to be worthy of these compliments---we're proud of them. Let us ticket YOU over this Standard Railway of the Northwest to Chicago, St. Louis and all points East and Southeast.

**A. D. CHARLTON, Assistant General Passenger Agent  
PORTLAND, OREGON**

**NORTHERN  
PACIFIC**  
YELLOWSTONE PARK LINE

#### EXCURSION TICKETS

On sale to the East and to and  
through YELLOWSTONE NATIONAL PARK  
Write for information and literature

## Northern Pacific Railway

Original, Direct and Only Line to Gardiner Gateway, Official Yellowstone Park Entrance

put on the market in a rush it would tend to overstock and lower prices. If at least a goodly portion of the prunes were not sold before they were dried we would be at a great disadvantage in marketing the crop, particularly when there is a full crop. If this demand is not met the jobber, both East and in Europe, would supply more of his requirements from California. A large amount of our prunes are consumed during the winter season; in some markets they are bought freely during the holidays. Europe demands each shipment so they will arrive for the Christmas trade; therefore preparation for this trade must be made in advance. Very little, if any, consideration would be given our fruit if they were deprived of this privilege of buying early. However, this is a matter that each individual grower must decide himself—whether he sells before or after drying. Existing conditions each season usually work themselves out, generally to an advantage to the industry as a whole. This has not been a profitable season; the sizes were at least ten points smaller than the average of former years, which is equivalent to one-half cent per pound. A ton of fresh fruit fell short about fifteen per cent of making as much dried fruit as usual. This is due to the prunes containing less sugar and more water and not from over-drying. Prices were not up to the average of former years, due to very low prices, the lowest for many years, on the California product. Our crop being large, much of it undesirable sizes, has created an unusual situation, similar to one twelve or thirteen years ago. I estimate the crop at thirty million pounds, all of which I believe will go into consumption before another season. I believe the industry of raising prunes will greatly improve; the demand is certainly increasing; Europe is buying more every year. The demand in the United States is increasing, and I believe the class of goods now going into the markets will bring about a condition so that the grower will get a better price for his fruit.

*Editor Better Fruit:*

I have had the opportunity to examine only one number of your publication, "Better Fruit," but am convinced I should be a subscriber, and therefore enclose one dollar. Yours very truly, Lewis Hall, Cleveland, Ohio.



THE ORIGINAL MOUNT GILEAD

## Hydraulic Cider and Grape Juice Press

produces more juice from less fruit than any other and is a

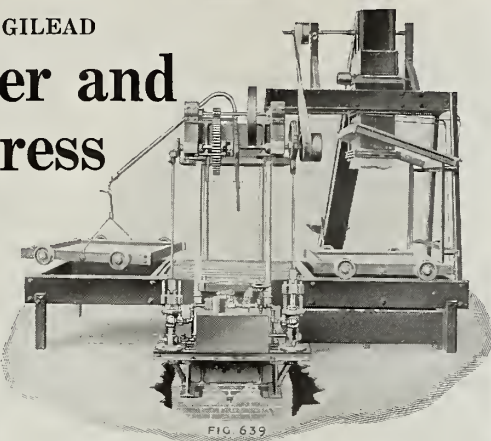
### Big Money Maker

Sizes, 10 to 400 barrels daily.

Presses for all purposes, also apple-butter cookers and pasteurizers.

If interested, write for catalog.

**The Hydraulic Press Mfg. Co.,** 60 Lincoln Avenue  
Mount Gilead, Ohio



## London Letter on Fruit Marketing

W. Dennis & Sons, Limited, Covent Garden, London, England

WITH the approach of another fruit season there is one question which necessitates the serious attention of all grovers—one may say the most vital question—and that is the marketing of their products to insure the greatest measure of success. This question is so complex, governed as it is by such a variety of conditions, that it is desirable for a shipper to have at his disposal absolutely reliable information from the various points of the map in which his interests are likely to center. How to get unbiased information is the point that has to be considered. Information from a man who is out purchasing is not likely to be in the interests of any holder of fruit. Neither is the information from representatives of small firms, established yesterday, so to speak, whose sole idea is to get a shipper to send as much stuff forward as possible, irrespective of conditions, and be sorry for him afterward, of any use to a shipper. The source from which the most reliable information is obtainable is an old established firm which has had long experience in the handling of fruit from the Western States of America, which knows thoroughly all the conditions governing the business, which has no pecuniary interest in the fruit it is selling and whose sole object, therefore, is to guard assiduously the interests of its clients, and so preserve its own business. With such information at his disposal from the various points of distribution the shipper is in a position to decide how to apportion his products in the various markets strictly in accordance with the requirements of those markets so far as this can be anticipated.

This article is devoted principally to the value of the London market for apples, pears and plums from the Western States of America. That London is the most important market in Europe in this respect cannot be denied. There is in London a class of buyers that is not found in any other market. These buyers compete actively with

each other for any fruit that is extra superfine and which stands out in quality and condition above anything else, the result being that for anything of this class prices can be obtained in London that cannot be touched elsewhere. As is well known, the two most prominent varieties of apples which come here are the Newtown Pippin and Spitzenberg from the Oregon and Washington growing centers. This fruit gets a splendid reception on the market, and when its appearance and condition leaves nothing to be desired very fine prices are often realized. The size of pack most favorably received are the 112, 120 and 128. The large-sized fruit does not meet with a ready sale. Californian Newtowns are consumed in great quantities in London, which is by far the biggest market for this fruit. Prices during the season range mostly from \$1.68 to \$2.04 per box. Prices of from \$2.40 to \$2.88 have often been obtainable for choice lots.

London is far and away the best market for pears. The famous Oregon Comice has met with great success here. This being a choice article, it is sought by the high-class buyer, and as a result of judicious "feeding" record prices have been made. Winter Nelis

also meets with an excellent reception and is largely in demand, as it is a pear answering admirably to the requirements of hotel and restaurant caterers. Whilst on the subject of these high-class pears it is well to point out that the greatest care in packing is essential. Boxes often arrive with the top layer of pears bruised. An efficient remedy would seem to lie in the placing of cleats at the ends of the boxes, just a shade higher than the bulge in the center. That is to say, if the bulge measures three-quarters of an inch the cleats at the end should be seven-eighths of an inch high. These cleats will protect the fruit when cases are piled on the top of each other during transit. Beurre Hardy pears are also favored here at prices ranging from \$1.68 to \$2.16 per half box, whilst

## Ship Your Strawberries Cherries and Vegetables

### To Butte, Montana

The Best Market in the West. Write for quotations. Send for our shippers' stamp. Prompt returns.

### Butte Potato and Produce Co.

BUTTE, MONTANA

A. J. KNIEVEL

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Sixteen years' experience on the Butte market.

## CUT-OVER TIMBER LANDS

At low prices. Liberal terms for small investors. Good soil, fine climate, two railroads, excellent markets.

### 20,000 Acres

Near Springdale, Stevens County, Washington, are placed on the market in tracts of 40 acres or more. Ask for information and booklet.

PHOENIX LUMBER CO.

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WENATCHEE, WASHINGTON

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### Control for the Season of 1912 over 1,500 Cars of the Finest Apples produced in the Northwest

VARIETIES: Winesap, Arkansas Black, Jonathan, Rome Beauty, Spitzenberg, Winter Banana, Yellow Newtown, Delicious, Missouri Pippin, Black Ben, Gano, Ben Davis.

"Quality and Pack Guaranteed"

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because of twenty years' study of the needs of box makers, and the devotion of our entire energy to nails alone, have become well known as the **best** and **cheapest** nails for box purpose.

**Our name** stands for uniform quality and full count.

Having established this reputation it is our constant effort to maintain, and if possible raise, the standard of excellence that earned it. All other brands of **so-called** cement coated nails are **distinctly inferior** and are sold on **our reputation**.

**Your own interest** requires that you refuse any and every substitute, and demand **PEARSON'S**

Conscientious merchants will not try to substitute the "just as good" kind. **They know better.**

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## Smith's Self-Feed Nail Stripper

(For Hand Nailers)

Used by Expert Box Makers

Handles all size nails  
2d to 10d

**URNS OUT BOXES FASTER**

Order Sample Now

**Price \$10.00**

**DELIVERED**

Liberal Trade Discount  
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## Smith's "Security Paper Holder"

All packers realize the enormous waste of paper occasioned in the wrapping of fruits by the non-use of paper holders. We guarantee this Holder will save its price in time and paper.

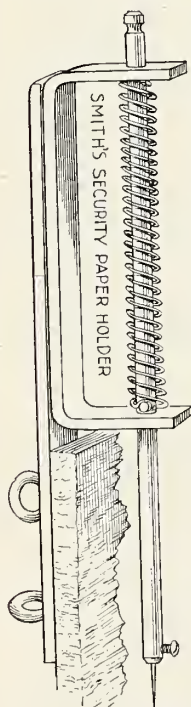
**MOST CONVENIENT**  
**Automatic and Non-Breakable**

Price \$1.00 each, delivered at any express office in the United States. (Liberal discount to the trade.)

**A. C. RULOFSON CO.**

No. 315 Monadnock Building, San Francisco, California

**DISTRIBUTING AGENTS**



Duchess rank as a good second-class pear.

The plum crops this year are poor both in England and France. There would seem to be a more than ordinarily good prospect this year for the shipper of Western State plums to London.

May we be permitted to commend ourselves as the class of firm where shippers will find the conditions for successful marketing which are set forth in the first paragraph of this article. A great part of the business of our London branch has been devoted to specializing in Western box fruit, for the proper handling of which we are well and favorably known, with many records in sale results standing to our credit. Any shipper who is not already in touch with us is cordially invited to write to us. He will find placed at his disposal the best possible information and up-to-date promptness in business methods.

### GET IN BUSINESS FOR YOURSELF

**THIS IS YOUR CHANCE. Will You See It—and Grab It?**  
Note our new Improved R. W. RAISING LEVER—it makes more speed, bigger capacity, more money per day.

### THE KING OF THE WOODS

Will cut a 6 ft log in 5 minutes, and small logs as fast as a buzz saw. It will pay your neighbors to have you cut their wood.

**THE KING OF THE WOODS PAYS FOR ITSELF IN THREE WEEKS.**

It answers the question—How can I make more money on the farm?

You want to know more about it—Send us your name on a postal for our Catalog. It doesn't cost you a cent and may bring big money for you.

Send for the Catalog D. S. Now.

REIERSON MACHINERY CO.  
PORTLAND, OREGON



You can Make \$20 a day and just ONE Man on the job



## Don't Prune Too Soon

By Prof. C. I. Lewis, Oregon State Experiment Station, Corvallis, Oregon

AT this season of the year there is a great deal of interest in summer pruning. We are experimenting at the present time at the college and in various orchards throughout the state, but we need to carry on such investigations over a period of several years before publishing our results. From what work we have done, however, we feel that where summer pruning is being conducted with idea of getting fruit to form, it is better not to prune until after the terminal buds have formed. The grower can easily determine when these buds have formed by looking at the ends of the twigs. He will note a plump bud, and will also notice that the leaves near the ends of the shoots, which heretofore have been rather small, are now assuming normal size. I believe that it is the best time to summer prune after these buds have formed and been allowed to harden slightly, allowing a week or ten days. This time will vary all the way from the middle of June to September. We have had a great deal of rain the past season, and one would naturally expect as the result that the terminal buds would form later than ever. This is not true in all cases. On some trees the terminal buds have already formed and on the large fruiting trees the lateral fruit buds are forming this year earlier than we had noticed heretofore. In pruning for fruit I would suggest that the grower does not cut down lower than this year's wood. We feel that better results are secured by moderate pruning, cutting back from one-third to one-half of this year's growth, but not cutting back into previous season's growth. This cutting back in the way indicated seems to have a tendency to thicken the branches materially and cause an accumulation of shoots which lead to the formation of fruit spurs. While the results may not be noticed this year in all probability it will have some bearing on succeeding crops. Pruning can be done at this time of the year if desired, even though the terminal buds have not formed, but in doing this it is the principal aim to take out undesirable branches or to control the formation of the tree, not to produce fruit. It is merely done to take out certain branches that interfere with the proper heading of the tree. Where systematic pruning is being carried on for fruit I would suggest that it be delayed until these buds have formed and are somewhat hardened. We have found that where this is done we get better results, and the growth is not as vigorous as it is when the pruning is done earlier. Some people feel that they can prune at any time during the summer and that they do not get the reactive growth that they do when the trees are pruned when dormant, in the winter or spring. This is not true. If heavy pruning is done while the trees are still in a vigorous, active condition reaction will take place and many of the buds will



The National Insecticide Law demands that all Arsenate of Lead shall contain—

Arsenic Oxide	- - - -	Not less than 12½%
Water Soluble Arsenic	- - - -	Not over ¾ of 1%
Moisture	- - - -	Not over 50%

And beyond these chemical requirements the Law is not interested.

The fact that all makers of Arsenate of Lead are required to come within the above restrictions does not by any means put the products of all manufacturers on an equality. The Law simply states the limit within which one can legally sell a product.

In the eyes of the Law, all men who do not break the Law are equal, but this does not imply that all men who are out of jail are equally high-class citizens.

The efficiency of and satisfaction received from the use of Arsenate of Lead are largely owing to its suspension, easy mixing and fast sticking qualities.

The Law does not attempt to regulate its manufacture in this respect, but these qualities, added to its killing power, make up the true value of an Arsenate of Lead.

The uniformity of the Grasselli Arsenate of Lead in all the above essentials is well known to the fruitgrowers of the United States, and it is the standard adopted by the Hood River Apple Growers' Union, Hood River; Rogue River Fruit & Produce Association, Medford; Yakima County Horticultural Union, North Yakima, and many other associations throughout the Northwest.

MANUFACTURED BY

# The Grasselli Chemical Co.

CLEVELAND, OHIO

Distributers in all the Fruit Growing Districts

## Get Away

GET AWAY from the cold winters, hot summers, tornadoes, sunstrokes, blizzards, electrical storms, to a place where they do not occur.

HOOD RIVER is free from all these conditions. Our scenery unsurpassed, our roads macadam and oiled, ranches electric lighted, good water, we are close to PORTLAND, our fruits command the top price, we are up to date.

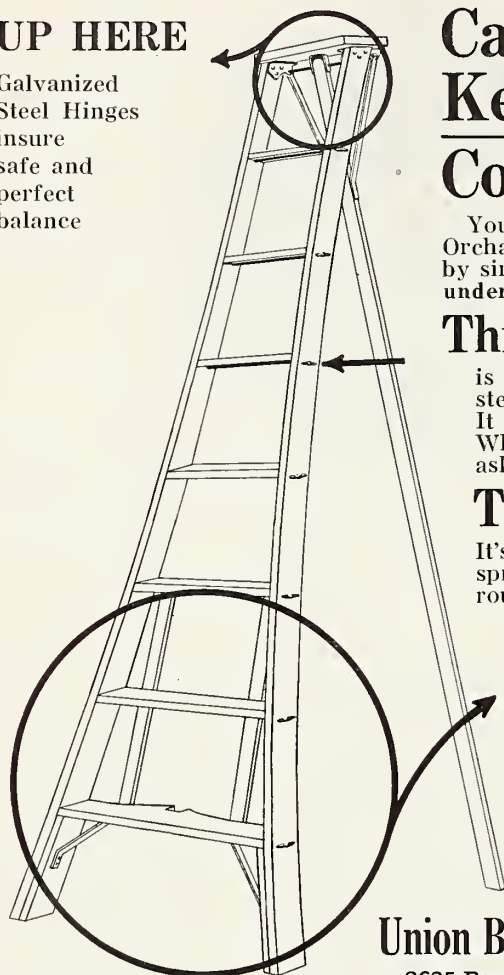
Send for our printed list of large and small ranches and for our literature. We will furnish you with reliable information.

Write **GUY Y. EDWARDS & CO.**  
HOOD RIVER, OREGON



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Galvanized  
Steel Hinges  
insure  
safe and  
perfect  
balance



## Can Always Be Kept in Perfect Condition

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be forced into shoots, and more injury than good can be done in influencing the fruitfulness, as this pruning might force out into shoots what would otherwise be fruit spurs.

Summer pruning has been advantageous on late-bearing varieties like the Northern Spy, and has given good results on Spitzenberg, Yellow Newtown, Baldwin and others. I have seen some surprising results on four-year-old trees. I would not advise much summer pruning until the trees are three years old, as I believe that they should maintain the greater part of the foliage the first three years. There is a tendency in many cases to prune too heavily in summer. Large branches are often removed. I have watched closely a number of orchards where severe pruning was tried and I have yet to find an orchard that I believe was benefited by it. It has developed sunscald and too pronounced an opening of the trees. At the present time young pears seem to show signs that they are going to come into dormancy a little slower than apples. In all probability a certain bearing pear tree like the Bartlett, for example, could be summer pruned perhaps earlier than I have indicated. The Bartlett often seems to have the tendency to set fruit on terminal buds and not develop enough lateral fruiting buds. This is rather an undesirable tendency of this tree, and I have felt that summer pruning will overcome it. Usually, with us, the Bartlett has a lot of close set spurs, so that the tree can carry a heavy crop. Pruning done earlier, from the middle of June to the middle of August, will correct, in all probability, this tendency of bearing only on the terminal shoots. We shall be able to report more fully on summer pruning a little later.

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Next to the apple, both in acreage and profitableness, comes the prune, which finds, in the Valley of the Walla Walla, every requisite for its successful culture. The Italian varieties are the most commonly grown and the profits, while not quite so great as those from the apple, are large enough to stamp the industry with success beyond peradventure of a doubt. The notable characteristics of the Walla Walla prune is its shipping quality. Practically all the prunes of the district are picked green and packed and shipped to Eastern and European markets. Naturally they command a far higher price than prunes suitable only for drying. Prune orchards are very dependable, easy to care for and the price is not subject to great variation.—Walla Walla Bulletin.

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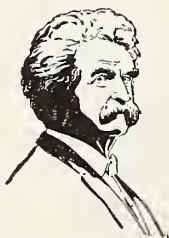
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## Stewed Prunes at Forty Cents A Dish

From the San Francisco Chronicle

ACCORDING to a report of the census bureau the State of California had 18,105 farms on which plums and prunes were grown in 1910, and 7,168,705 bearing trees, which produced 9,317,979 bushels of fruit, the major part of which was dried and converted into the prune of commerce. For this fruit the growers of the state received much less than an average of five cents a pound, yet we are reliably informed that in a leading restaurant of Chicago, when anyone feels inclined to indulge in prunes, he is called upon to pay forty cents a dish, which probably contains eight or nine prunes if they are of medium size, or five or six if they are very large.

The interesting question has been raised whether this is not an excessive charge and an unfair discrimination against a California product, but an examination of the menu would probably disclose that the price of prunes harmonizes with that of every article on the list. In the swagger restaurants of New York baked apples appear on the menu at thirty-five and forty cents, and if they are served without the intervention of the cook they figure in the bill at twenty-five cents a plate. The diner may consume but one, and experience may have taught him that he could step around the corner to a fruit stand and buy five or six equally good apples for the same amount demanded for one, but that fact does not materially affect the problem the hotel keeper has to deal with, nor does it concern the guest who goes to a first-class restaurant with quite another object than the mere satisfaction of appetite.

If people would adhere strictly to the primary idea or instinct that prompts eating there would be no prunes sold at forty cents a dish, and one might go a step further and safely assert that there would be no prunes at any price. It is because man yearns for something more than acorns or bananas that he runs into trouble. If he would conform strictly to a diet which the stores of nature provide he would not be confronted with the numerous complex problems which beset man as soon as he abandons the simple life and calls on his fellows to help him to gratify his desires. Of course there would be fewer men under such circumstances, for when mankind refuses to exert itself nature, despite its reputation for bountifulness, treats him in a niggardly fashion. Her response is liberal when an all-round disposition to "get busy" is displayed, but not otherwise. And nature, curiously enough, does not seem to demand that all the exertion put forth by man should be in one direction. It seems to be part of her scheme to set in motion

a great number of activities to the end that much shall be produced. Her processes are often circuitous, but with a little pains one may follow them and discover a connection between prunes at forty cents a dish in a first-class Chicago restaurant and a production of 9,317,979 bushels of prunes by California orchardists, ninety-nine one-hundredths of which are consumed at a cost of less than two and a half cents a dish.

At the same time that the fashionable Chicago restaurant is dispensing prunes at forty cents a dish a resort on the same street, patronized by the people, serves them at five cents. Obviously it is not necessary to devote much time to searching for the offending middleman in such a case, but there is little satisfaction in finding him, for when he is discovered the fact is disclosed that he is merely the intermediary for a large number of persons, all of whom share in the exaction. The fashionable restaurant where the toothsome prune is served at forty cents per dish probably cost a couple of million dollars to build, and requires a small army of employees of all sorts to conduct it in the style demanded by its guests. The architects, the masons, the carpenters, the glaziers, the dec-

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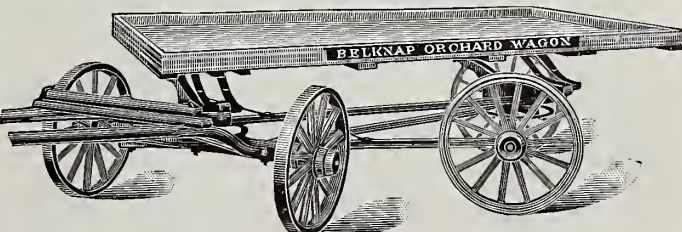
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orators, the men who made the furniture, the clerks, the cooks, the bell-boys, the municipal officials whose emoluments are contributed by the taxpayers, for the hotel pays big taxes; the gas and electric employees, all gather toll from the dish of prunes in order that they may in turn eat prunes.

In the final summing up it will be seen that prunes at forty cents a dish help to solve the problem of plenty of people getting prunes at five cents, or even at two and a half cents a dish, and that the price, considering the surroundings and attendant circumstances, is not extortionate. That the much-abused railroads and wholesale and retail grocers are not to blame is self-evident. If they were the villains in the case there would be no five-cent dishes of prunes in Chicago. It is sometimes urged that the vice of the modern system of distribution is due to the unnecessary multiplication of middlemen, and that it is desirable to bring the producer and consumer as closely together as possible. This argument, as often as otherwise, is made by the man who is indirectly taking tolls from the forty-cent dishes of prunes. He may not be able to see just where he fits in the scheme, but he does somewhere, whether he is a capitalist or a pauper, a professional man or one who works with his hands. But after all that is said on the subject of prices and the extortion of the middlemen, and the desirability of eliminating as many of the latter as possible, the fact remains that the further man gets away from the simple life, and the direct relation of producer and consumer, the more things he has to consume; and that this is due to the very complexities about which so much complaint is made ought to be evident to everyone. It is because people far away from our orchards want prunes at forty cents and at five a dish that California has planted 7,168,705 prune trees. If the consumers who live at a distance, and they are also the middlemen, did not create a demand for California prunes the chances are that none would be raised, and thus even the tiller of the soil and the liver of the simple life in California would not know the delights of a dish of stewed prunes. He would have to stick to straight hog and hominy, as is still the custom in those parts of the United States where the villainous middleman has not penetrated.

## Prunes in Early Days

C. H. Welch, before Oregon State Horticultural Society

I CANNOT say that I am one of the "old guard" because I came into the society in its second year, twenty-four years ago. I have seen a great deal larger crowds in some of our early meetings than are here today. Right away after I joined the society they started the prune-growing industry in this state. At the second or third meeting here in the city we had a large crowd for that day, and they were all prune crazy. That is the way to word

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it because it is a fact. For instance, I had a ranch out here on the hill—Mount Tabor—and I thought it would be feasible to plant a few walnut trees, so, being interested in this society, I laid it before the society, but no, that would not do, walnuts would not grow in Oregon; I might grow a few walnuts or filberts, but there was nothing but prunes, prunes, prunes. Well, now the result is known by all of you “old guards.” Hundreds and thousands of acres of prunes were set on land that is more valuable for almost any other kind of farming, as far as I am informed now. Prunes have to be set in the right place in the right soil and by the right man to make a success. I see some of you are nodding your heads, so I think I have it just about right.

Now this apple business that we are mostly interested in today is taking hold of this state pretty strong. As I go back in memory to those meetings it makes me feel as if they were setting prunes again. But I want to say right here that I have often wondered how Dr. Cardwell ever kept us together. Verily, he must have the tenacity of a bulldog. You are all fully aware that after 1892 things got bad looking, pretty blue, in Oregon. Still the doctor didn't give up. Every little while I would get a letter from Professor Lake—he was the secretary then—wanting something. So you see that this afternoon, in honor of the “old guard,” seems very appropriate to me.

Experience has taught me that a man must have intelligence and shrewdness enough to understand his station, his place; what may grow to the best advantage in one place will not necessarily in another in this mountainous country, so you will have to look after these things if you make this society a great success and have it live on for twenty-five years more. I know it has lived through probably the hardest times we shall ever see, but I think it is due mostly to intelligence and grit.

While the State of Idaho does not contain very large cities like Oregon and Washington, it possesses a number of moderate sized cities like Lewiston and Boise, which are an indication of the state's wonderful prosperity. Idaho has thousands of acres of land suitable to many varieties of farming which are being sold at exceedingly reasonable prices. This affords a splendid opportunity to the man of moderate means, but the man of capital is always welcome in the Northwest. We might add that nowhere in the country has capital realized such handsome incomes on the amount invested as throughout the Northwest country.

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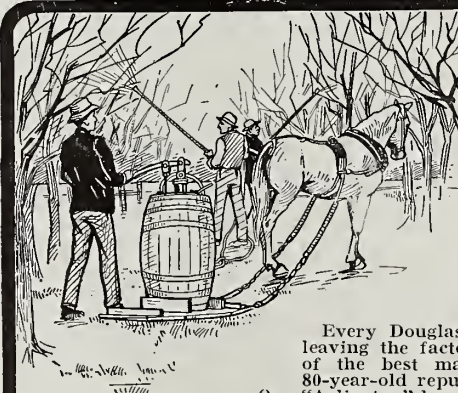
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## Horticultural Leaders for Western Oregon

By H. S. Gile, Manager Willamette Valley Prune Growers' Association, Salem, Oregon

HAVING been identified with the Willamette Valley for so many years I shall assume that it was the wish, when this subject was framed up and assigned to me, that the term "Western Oregon" should be construed to mean the Willamette Valley. I may scarcely be supposed to possess expert knowledge concerning "horticultural leaders" in other sections of Western Oregon, and I certainly do not claim to possess any technical knowledge of horticulture in Western Oregon except so far as prunes may be considered worthy to be related to horticulture. So much and such widespread interest has been aroused during the past few years in relation to apple culture—that most fascinating of all horticultural pursuits—that the State Horticultural Society has often been accused of devoting itself almost exclusively to apple culture to the exclusion of other worthy varieties of fruit which deserve to be promoted and should be classified under the general heading of horticulture. In fact so general has been the interest in apple culture to the exclusion of other varieties of fruit that the horticulturist who devoted himself to the culture and marketing of prunes has almost been considered as a horticultural outcast (I had almost said "scab," but I don't like the word). In fact there has been little else to the

meetings of the State Horticultural Society for many years except that which has been of interest to the apple growers. This is not said in any spirit of criticism because this apple microbe has been in the air; it has been in evidence everywhere, and to be out of harmony concerning apple culture, even in the Willamette Valley, meant to be practically out of date as a horticulturist. It is, therefore, a pleasure to note the change of heart manifested in this respect, and perhaps after all the prune horticulturist may have himself been most at fault because of his failure to boost his own product.

If we include within the limit of this district Southern Oregon apples must be considered the foremost of our horticultural leaders today in Western Oregon. Furthermore, I am inclined to believe that there may be as great apple possibilities along the eastern and western foothills of this great valley as may be found anywhere in the wide world, and with the present extension of electric and other lines of transportation some of these districts will shortly be tapped and considerable quantities of land still reasonably cheap may be found which the apple enthusiast might do well to investigate. There is no doubt but that we should, under this head, endeavor to suggest some horticultural possibilities which

might reasonably be expected, under proper development, to become horticultural leaders, and in this manner we may possibly find the way to greatly enlarge the entire field of horticulture in Western Oregon by the addition of other varieties of fruits which may contribute to our producing power. With this objective in view I wish to call attention to the possibility of successfully featuring three or four of the fruits in the Willamette Valley with reasonable certainty of profit. None of these varieties are new; all have been tried and have passed the stage of uncertainty and may be considered well established. First, attention is directed to prunes, in which I am specially interested and in which I have been continuously interested from the very birth of the industry. I am more firmly convinced every day that the Oregon prune should be, and very soon will be, the horticultural leader of Western Oregon, and from a

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crop value standpoint it will shortly be—if, indeed, it is not already—the leader in the entire State of Oregon, as it certainly is today the horticultural leader in the Willamette Valley. The man who owns thirty-five or more acres of well located prune orchard is insured a fine return upon his investment for many years to come. Just one illustration is noted here, a crop near Creswell, grown on 150 acres last season brought its owner \$23,672, at a total year's costs, including taxes, of \$8,172, leaving a net cash return for the season's crop of \$15,500; and this orchard was one in which there was considerable loss on account of the exceptionally early heavy September rains. The previous season's crop on the same orchard amounted to about \$3,000 less. By the term "well located" is meant that he should select a location which is known to produce good crops with reasonable regularity and with the minimum of damage arising from loss at the time of harvest.

It will be readily admitted that, generally speaking, a moderate elevation above the floor of the valley is most desirable for the successful culture of the Oregon prune. The rolling hills and the western, northwestern or northern slopes have proven in a general way the best adapted, although there are some exceptions to this as to all rules. Notwithstanding the fact that last season the crop was seriously damaged by early and severe September rains, the value of the prune crop has been considerable. An estimate is given herewith which has been made up from figures furnished by the packers and may be considered to be about as near correct as it is possible to secure such figures with the facilities at hand. The total quantity of Oregon (or Italian) cured prunes produced in Western Oregon and in Southwestern Washington may be placed at approximately, Italian 24,150,000 pounds, Oregon French prunes 1,497,000 pounds; total quantity 25,647,000 pounds, at a total value of \$1,850,000. We would be safe in figuring that double the quantity which has been harvested and sold last season could have been marketed without much additional effort. In my judgment there is room for very great expansion in the culture of Oregon prunes without in the least affecting the market conditions. The demand is at present increasing many times faster than the increase in supply. The demand for prunes at home has increased in a marvelous manner and the increased demand from abroad has been a constant source of surprise to the most optimistic Oregon prune enthusiast. We have as yet scarcely thought of varied and improved methods of preparing this fine fruit for the market. With an active demand and a limited supply, a condition which has obtained in recent years, there has existed no necessity which has had a tendency to force the packer to undertake new and advanced methods in packing. This will come only when there is a surplus

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Figure 1490



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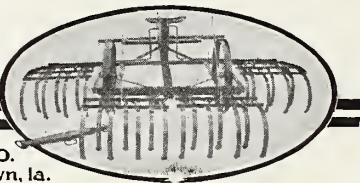
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in our production. Here is a field full of interesting possibilities which await some genius to experiment and develop diverse methods of preparation for the market and the table.

In the second place I wish to call attention to the culture of late pears and the possibility of this fruit becoming in the near future of considerable importance. Not much attention has been given to the culture of late pears, but there seems to be no good reason why to a considerable extent three or four varieties may not be exceedingly profitable. Almost any good land located in the Willamette Valley in Western Oregon will grow to perfection such varieties as the Clairgeau, Comice, Bosc, Duchess and perhaps other varieties, but these four would have my preference in the order named. Bartletts, of course, will be grown in connection with late variety pears, especially so if you have a reliable cannery near at hand to absorb the output. These three or four varieties of late pears may be handled with nearly as much leisure as your apple crop, and they will stand shipping to almost any market at home or abroad. A fancy packed half-box of Clairgeau pears is about as handsome a package of fruit as you can find in the entire pear family, and for exquisite spiciness of flavor I submit that they are hard to beat when they are just right in ripeness. We need scarcely dwell on the superb flavor of the Western-grown Comice, and in the Willamette Valley there is now being produced a limited quantity of this fruit which cannot be excelled by any district east or west. We have in the vicinity of Salem one good sized pear orchard which produces regularly a profitable crop, chiefly Bartlett, but there is scattered throughout this tract a total number of trees of fall variety pears equal to approximately ten acres. The crop last season from this ten acres sold for \$6,061.04 net. One carload of this crop consisted of the Comice variety and sold for \$2,492. I am firmly convinced that a few good sized commercial orchards of late pears, including the four varieties mentioned, might be safely planted, and pears might easily be made to take at least third place as a horticultural leader, whereas according to the State Horticultural Society's last year's estimate they stand about fifth.

In the third place let us consider cherries. At the present time cherries stand about sixth in value of production in Oregon. I cannot speak concerning this variety of fruit with the conviction which comes from personal experience, but it is a well-known fact that we have vast quantities of reasonably low-priced land, consisting of rolling hilltops and desirable slopes,

## PRIZE APPLES OR CIDER APPLES?

For the past four years the great state of Pennsylvania has made a special appropriation of from \$30,000 to \$40,000 annually to teach the fruit grower how to use Lime-Sulfur washes, and incidentally, to warn them against the use of "Scalecide," in spite of which the demand for "Scalecide" has increased from year to year and apples from trees sprayed with "Scalecide" for five years took all the first prizes at the Pennsylvania Horticultural Society meeting in 1910; three silver cups, the Adams County sweepstakes and 20 first prizes at the meeting of the same society in 1911. Which pays best? Prize apples or cider apples? "Scalecide" has no substitute. A postal request to Dept. D will bring you by return mail, free, our book, "Modern Methods of Harvesting, Grading and Packing Apples," and new booklet, "SCALECIDE, the Tree-Saver." If your dealer cannot supply you with "SCALECIDE" we will deliver it to any E. R. Station in the United States east of the Mississippi and north of the Ohio Rivers on receipt of the price; 50-gal. bbls., \$25.00; 30-gal. bbls., \$16.00; 10-gal. cans, \$6.75; 5-gal. cans, \$3.75. Address, B. G. PRATT COMPANY, 50 Church Street, New York City.

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that would bring enormous profit in the future if planted to cherries. We have all noticed during the past few years the invasion of the Oregon markets by the large canning interests of California. The Western Oregon Royal Ann cherry is now eagerly sought after by all fruit canneries as well as by the makers of Marasehino cherries, and the normal present-day demand has been nowhere near supplied. What measure of success might be realized in the shipment of the wonderfully beautiful Lambert and Bing varieties remains for the future to reveal when they shall be grown in sufficient quantity to demand an outlet. There can be little doubt, however, that the pre-cooling process which is now being widely used in California will prove to be the solution of many of our difficulties and will make possible the shipping of much of our fresh fruit out of Western Oregon to distant markets. However, it is scarcely probable that within the next ten years there will be produced a sufficient quantity of these fine, large black cherries to supply the fresh fruit demand of the Pacific Coast alone. Ripening late, as this fruit does, the markets of the Coast, including Los Angeles and San Francisco, will take considerable quantities of them, as the California grown cherry at that time is well out of the way. There is ample room for extensive plantings of cherries and good reason to believe that they may safely be counted upon as a leader of some importance.

In the fourth place let me call attention to loganberries as a possible leader and a certain profit-making product. Along about 1906 and 1907 the country had quite a fever for planting loganberries. The acreage was increased rapidly, and as production follows planting quickly and abundantly we very soon had more loganberries than could be disposed of. The canners at that time hardly knew how to manage them. They could not be successfully shipped; first, because they do not carry well for long distances and, second, because no market was open for them in quantities. The fruit, therefore, became almost without value. In 1970, if I may be pardoned personal reference, our firm advocated and even urged some of our friends to try drying their loganberries. They did so, and in 1908 quite a considerable quantity was dried. We bought what was offered and sampled the country from Nome, Alaska, to Boston, Massachusetts, and back again. Our firm probably made the first shipment of any considerable quantity that was made out of Oregon in the fall of 1908. This shipment went to Boston and we carried a surplus stock there in storage until late the following spring, but none of the Boston merchants who bought loganberries in the fall purchased any further lots. The result of this transaction was that late in the spring we reshipped a considerable quantity of this fruit back to the Northwestern States, and this was the beginning of what has since become an



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**THE INTERMOUNTAIN  
FRUIT JOURNAL**

Grand Junction, Colorado

active demand for dried loganberries in the inland portion of the Northwest. The total quantity produced during the past season was not more than three per cent of the orders held by dried fruit dealers, and practically all of these orders came from two or three states in the Northwest and from one or two small markets only. This is mentioned simply to give an idea of the possibility for the expansion of trade on this fruit. Any man who already owns a fruit evaporator and who has soil that is well adapted will certainly make no mistake in giving some attention to loganberries. He has three chances to market his crop profitably. First, there is now a good demand from nearby markets for the fresh fruit; second, canners have learned the art of canning and preserving this fruit for the trade in their line, and they are each year more and more active purchasers of loganberries for canning, preserving and jamming; but in my judgment there is an outlet many fold greater than the cannery which has not yet been touched. I believe it is possible to manufacture the loganberry into a beverage to be prepared, sold and used in much the same form as grape juice. Many who have experimented in their homes in a small way believe that loganberry juice is better than grape juice, and if this fruit can be grown and if it can be successfully and profitably manufactured into something in this form there is an almost unlimited field for it, and there is scarcely any limit to the demand for such a product. Lastly, if all other markets fail to offer the grower a satisfactory return for his loganberries he still has a certain outlet for his fruit in its dried form. At eighteen to twenty cents per pound to the grower for this fruit in dried form, there still remains a very handsome margin of profit in its production. The loganberry can be grown as a filler in young orchards where the soil is adapted to its culture, and I am not at all sure that it may not become one of the leading features in the horticulture of the Northwest. There will no doubt be some very large plantings of this fruit in the near future.

Strawberries, peaches and other varieties of fruit which are profitably grown in certain districts have not been touched upon because I believe that the varieties above mentioned possess more magnificent prospects and may be undertaken with certainty of success. The horticultural leaders in Western Oregon stand at this time in about the following relation to each other: apples, prunes, pears and loganberries, although it is almost a certainty that prunes have reached first place and loganberries, now well down the line, have a good chance at no remote date to become a close second.

#### Editor Better Fruit:

Enclosed find money for one year's subscription to "Better Fruit." It is a grand magazine and getting better with every edition. Wishing you the success you deserve and assurance of my continued appreciation of the good work you are doing, very truly yours, Harry H. Vollmer, Chicago.

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## The Mutual Association

By E. W. Coulson, Seotts Mills, Oregon

**T**ODAY, in every line of business, men are striving for the greatest possible success. In some lines each is independent one of the other, while there are many who will never reach the highest degree of success without harmonious co-operation. The prune grower has been working too much by himself. This lack of co-operation among the producers of this very remunerative product of the tree has doubtless cost the industry much. The owners of prune orchards are beginning to realize this fact and mutual associations are being organized to help perpetuate the interests of the business. As with all other industries concerned with the production from the soil, there are the two distinct phases of the business—the producing and the marketing. The mutual association is organized primarily to further the interests of marketing the fruit, but it may at the same time be of much interest in the production. Lack of important knowledge concerning either is liable to prove unsatisfactory and disastrous in the end. The mutual association is a means of education to its members. Discussions indulged in as to best methods of pruning, spraying, cultivating and of fighting pests of different kinds cannot help but prove beneficial. Each individual grower has thus a chance to profit by his fellow member's experience, in this way deriving a beneficial knowledge unobtainable from the different invaluable horticultural papers for which he may subscribe. Greatest economy in the cost of production can hardly be attained other than through the organization. Through it large quantities of spray material, fertilizer and all commodities used to assist in production can be purchased at wholesale prices. Uniformity of action relative to the riddance of different pests and infections of the orchard of certain localities can, with the aid of the fruit inspector, be gotten at better by a local organization.

The mutual association has for its main object in organization, as has been stated, the better marketing of the fruit, and we might well add the marketing of better fruit. In the marketing of the dried product there are some things which enter in to make it very unpleasant for the seller. The general tendency on the part of the producer to slackdry, especially when the price is above the average, is the cause of much dissatisfaction both to seller and buyer. Nothing else has hindered the advance of the dried prune industry of the Pacific Northwest as much as this one thing—the improper curing of the fruit. This is done, regardless of the bad effect it has on the industry in general, to retain as much weight as possible in the prune. Why was it that so much dissatisfaction was reported because of mold and fermentation of the fruit by buyers in the East the past season? It was doubtless largely due to slackdrying, although in some in-

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Registered or "Pedigree"  
vs.

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The Y-S Nursery and happily a few others are now offering to the public trees grown from mother trees selected and registered for performance. Most of the large nurseries belong to the old school methods of growing only the non-registered or grade stock. However, all orchardists who have been consulted and officials of exactly twelve fruit growing states from whom we have letters on file, say there is a difference.

In fact, most nurseries are now advertising that they go to the best orchards for their scions. Then why should such nurseries find fault with the Y-S for going farther in the method of growing some stock from performance record specific individual trees? And why should they warn the public that if they patronize such concerns they are "being deceived"?

Such methods are not only unprofessional but will not be approved by the up-to-date orchardist and the professional men who are interested in the results to be secured by the growing of the high grade commercial orchards. It will pay you if you are building an orchard to last for your own and future generations to investigate the registered nursery stock, which some, for want of a better term, called "pedigreed," before securing your trees. Valuable information on this line, and prices which are only slightly higher, may be secured by addressing the

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[Watch this space in next issue]

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stances it might have been a result of carelessness on the part of the packers in the packing of the fruit. It is not likely that but few growers know that improperly dried prunes cannot be properly packed by themselves, but are often mixed with some properly dried ones and put out thus, never to prove perfectly satisfactory. A dobie (soft) prune cannot be well processed; it will not hold together when pressed into the box. The buyers' efforts to establish a standard of excellence along this line are often fruitless because the grower does not fully understand the situation. The latter figures out that the former, in his demands, is only working for himself rather than for the good of the cause at large. Should every locality of growers organize a mutual association and become interested in the placing of their goods on the market in general the necessity of absolute thoroughness in drying would be forced upon them in such a way that they would be obliged to uphold the standard which must be established in order that we, as prune growers, shall realize the best possible results from our industry. As the quality of the goods is increased, so will the business prosper. Thoroughly dried and carefully sorted prunes nicely packed are sure to make toward the establishment of a good reputation for the fruit. Although deemed impracticable by some, yet if the mutual association is possessed of sufficient capital to own or control and operate a packing plant, so much to their credit. By so doing the grower's profits may be increased to the extent of a goodly portion of that of the middleman's. This amount, provided the business is run on an economic basis, will be from eight to ten dollars per ton.

Occasionally the fruit is not up to the ordinary standard in quality in its natural state, and at such times extreme diligence should be given the process of curing it. For instance, the weather during last season was very detrimental to the proper maturing of the crop. Too much rain at ripening time caused a lack of sugar, consequently the drying process was made difficult, and on a low heat the prune would appear to be dry when it was not. Due care must be exercised at such times that the standard of the condition of the product be not lowered. An inspector, appointed by a co-operative organization to inspect and pass judgment on the fruit as it is being turned out at each respective grower's drier, will be able to assist greatly in the betterment of existing conditions in the dried prune business.

We have spoken of the marketing of the prune in its cured or dried state, while the marketing of it in its natural state has come to be a feature of no small importance in the business, some localities shipping their entire crop as picked from the tree, in a semi-ripe state and then packed. The mutual association is also beneficial in assisting this part of the business. As we have said, co-operation is necessary in

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## Catalogs Advertising Matter

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order that the best of results be obtained and the association formed for the mutual benefit of all, fosters this spirit. The sooner the prune growers get together and work harmoniously for the advancement and perpetuation of their interests the sooner will they achieve the greatest possible success. Harmony and co-operation are elements which must enter into the organization of a successful mutual association. After all, what we need to best further the interests of this industry is better organization. Let every community of prune growers form a mutual association and let there be held reasonably often, in the most centrally located places, conventions to which will be sent delegates from each district to aid in the discussions of the different phases of the business of most importance. When each prune grower is made to realize the responsibility resting upon him to make possible the better establishment and maintenance of the industry then will it be realized that a long step in advance has been taken.

### Pruning the Prune Tree

By W. K. Newell, President Oregon State Board of Horticulture

CAREFUL pruning is just as important an operation in the growth of a satisfactory prune tree as it is in that of any other fruit tree. All too often this importance is overlooked and the result is a prune tree grown old and useless long before its time; a scraggly stunted tree filled with a mass of dead limbs and small twigs, and bearing fruit, if any at all, too small to be profitable. It is often said that the prune does not need any trimming, but this is just as serious a mistake as was the notion at one time so prevalent as to be almost universal here in Oregon, that the cherry tree should never be pruned. A little consideration of the nature and growth of a tree will make clear the necessity of a moderate amount of pruning.

It is the nature of the tree to produce seed. The fleshy edible parts of the fruit that we prize so highly is only a secondary matter, the seed to reproduce its kind is the prime object, hence it is very obvious that we must in some way divert part of the energy of the tree from the production of unnecessary seeds to the development of larger and finer fruit. As every tree will produce far more bloom than it can ever set or mature fruit, so it will produce more buds and branches than it can support or find room for. A point that should be well understood is that the parts of a tree are not supplemental as are those of an animal, but are competitive in the highest degree, and it is a constant struggle among the branches as to which shall survive. A vast number of buds remain dormant, and many branches are crowded out and die from lack of air and sunlight. Hence it is plain that we should remove these unnecessary limbs at an early stage of their growth

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### RHODES DOUBLE CUT PRUNING SHEAR

Pat'd June 2, 1903.

RHODES

**RHODES MFG. CO.,**  
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**THE only pruner** made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay Express charges on all orders. Write for circular and prices.

## Real Estate

Twenty-five years' residence in Hood River. Write for information regarding the Hood River Valley. Literature sent upon request. Address all communications to

**W. J. BAKER & CO.**  
HOOD RIVER, OREGON



and turn the energy absorbed by them into the production of fruit or the better development of the desired branches. It is only by careful pruning that we can grow a strong, stocky tree that will bear up under a full load of fruit without breaking or splitting down, or without the need of a large number of props. As a general rule the prune tree grown in Western Oregon or Washington will require more pruning than will the one grown in the Eastern part of either of these states or in Idaho.

The best season of the year for pruning the prune is in the late winter or early spring just before the buds start their growth, and it may be continued if necessary right up to blooming time without any harmful results. With our usual mild winters there is little risk in pruning at any time during the dormant season, but with young trees, in case of severe freezing weather, there might be loss or injury of the end buds, hence it is advisable to wait until the severest cold weather is past. The best implements for pruning are a good hand shears, a two-handled shears with handles about 28 to 30 inches long, a medium-sized pruning saw and a pole shears with handle to suit the height of the trees. With tall trees it is handy to have two pole shears, one with a five or six-foot handle, the other with a ten or twelve. A can of white lead paint for large cuts completes the necessary outfit, though some other tools may be convenient in some cases. Be sure that all are sharp and the shears so adjusted that they will make a clean cut without tearing the tender bark at the edge of the cut. Cut small limbs just above a bud, allowing not more than one-half inch projection. They will then heal over entirely, where if more wood is left it must die back, leaving an unsightly wound. Where large horizontal limbs are cut, first make a cut from the under side to prevent splitting or tearing of the wood or bark. Upright limbs should be cut or sawed with a slope, preferably to the north, so that water will always drain off and not have a chance to soak in and cause rot. Many ingredients are recommended for painting over the wounds, such as coal tar and grafting wax, but plain white lead, thinned to the proper consistency with linseed oil, is the most convenient and the most satisfactory. Allow a few days' time for the wound to dry before applying the paint.

As with most all the tree fruits, the one-year-old tree is the best prune tree to select for planting, and they should be headed to about twenty inches. The prune naturally tends to spread out and throw its limbs to the side, where they bend nearly or quite to the ground with their load of fruit, hence it is necessary to prune for a more upright growth. For this purpose the low head is best, starting with three or four well placed branches and training them upward in a vase-shape tree rather than in an umbrella-shaped top. The prune does not require much heading back

## ARE YOUR CROP YIELDS SATISFACTORY?

They are certainly not what they would be if you used Clark's Double Action "Cutaway" Harrow. It requires thorough cultivation to make the soil fertility available for your crops. "Thorough Cultivation," and "Clark's Double Action 'Cutaway' Harrow" are synonymous. The entire machine is made of steel and iron, except the pole, which is jointed so that there is no weight upon the horses' necks, and can be removed in one minute and used as a tongueless, as shown in cut. This is a big feature in moving from field to field, insuring safety to horses. The disks are of cutlery steel, shaped and forged in our own shops, where the only genuine "Cutaway" disks are made. The Double "Cutaway" does twice as much as an ordinary disk harrow and better at the same cost. The inflexible frame holds the gangs rigidly in their places, and compels them to cut high, hard ridges, carrying the soil into the hollows and leaving the ground level. With the flexible or tandem harrows the gangs conform to the surface and do not cut and level the hard, irregular places. Clark's stir every inch, leaving a finely pulverized seed bed. By setting the inner gangs straight on sharp turns, the Disk turns easily, leaving the ground even. No interlocking of gangs.

Modern farmers disk before they plow their land. It puts fine soil in the bottom of the furrow, where otherwise would lie loose clods that make a strata through which the sub-moisture can not rise. For this no other disk equals Clark's.

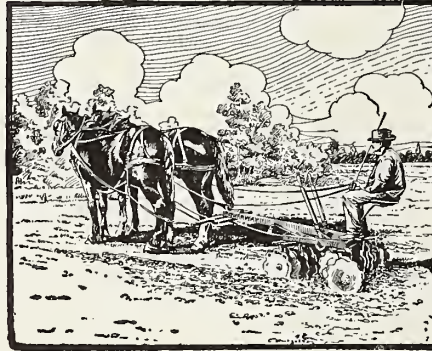
### What Prof. Bailey Says:

"The Double Action 'Cutaway' Harrow has been satisfactory. I use it almost continuously on our hard clay land with good results."

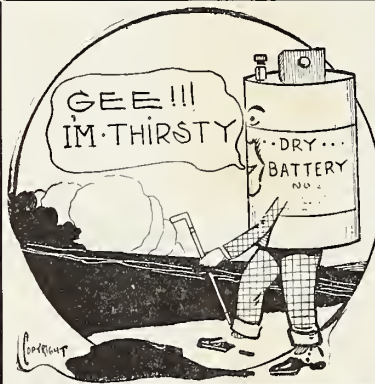
If your dealer can't supply the genuine "Cutaway," write us. Satisfaction guaranteed. Twenty-five years' experience back of every sale. Prompt shipments. Get our booklet "Intensive Cultivation." It's free. We make a special tool for every crop.

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## FRUIT GROWERS, YOUR ATTENTION

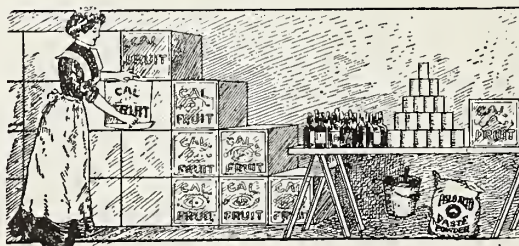
Royal Ann, Bing and Lambert cherry trees; Spitzenberg and Newtown apple trees; Bartlett, Anjou and Comice pears, and other varieties of fruit trees.

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added to cold water, instantly makes a beautiful, smooth, white paste. Ready for immediate use at a cost of ten cents a gallon. No labor. No muss. No spoiled paste.

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**Rid Your Land of Gophers**

**RATS, MOLES, SQUIRRELS.** A 10-year old boy can do it with this "**CINCH**" TRAP

Users kill hundreds in one season with one trap.

No gun, no poison, no bait. Absolutely safe. Made entirely of steel. Guaranteed. *Your money back if it's not the best trap you ever saw or heard of.*

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**Supply Water for Fruit**

without expense for pumping by the simplest, most efficient water-power method - automatic Rife Rams.

Cost little to install - nothing to operate. Raise water 30 feet for every foot of fall, and lying above canal or stream supplied with water. Pump automatically day and night, winter and summer. Fully guaranteed.

If there is a stream, pond or spring within a mile write for plans, book and trial offer, **FREE**

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**SEPARATES COLD MILK**

That's just one reason why the

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Send today for Free Catalog S28, showing where you save on a cream separator. A postal is all right. Write today sure.

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**A Full Line of Dairy Machinery and Supplies**

after the first two or three years, but should be handled to encourage its upward growth. The fruit does not require hand thinning, nor where grown for the evaporator hand picking, hence not so necessary to keep close to the ground. The first two or three years head back the branches vigorously to get strong, stocky limbs; after that check up a little until tree comes into bearing. After that give light annual thinning of the bearing wood to prevent crowding and just enough heading back to induce a few inches of growth of new wood each year. This is a very important point, because, as said before, the natural tendency of the tree after a few years of heavy bearing is to make little or no growth of new wood, and the result is small, unprofitable fruit. Labor cost is so great that it does not pay to thin the fruit by hand where the crop is grown for the evaporator only, hence the necessary thinning must be done with the pruning shears. To grow the large money-making prunes requires strong, vigorous trees with plenty of space, air and sunlight for the fruit to develop.

### Completing Prune Survey

The prune survey which is being made by the horticulture experts of the Oregon Agricultural College is now practically completed. Eleven counties are included in the survey, and some seven hundred growers have been interviewed as to methods and as to the causes of success or failure. The material thus gained will be of inestimable value in the courses of instruction given by the college, both in the regular work and in the winter short course for farmers, which will this year include special instruction for those interested in prune growing. "The sole intention of this course and of the survey is to find and solve the problems in prune growing as they are presented in this state," said Professor C. I. Lewis of the horticulture division in discussing the plans for the winter course. "We wanted to find out just what is the true status of the prune industry and what problems are of greatest importance and demand immediate investigation. We wanted to know in what lines of work there seems to be a lack of common knowledge. The survey and short course seem to open the best opportunity to ascertain these facts. We hope thereby to unite the prune growers, that they may give each other the benefit of their experience in solving some of their problems. To this end we are asking some of the growers in different parts of the state who have had particular success in one or another phase of the business to give short addresses during this winter course, in addition to our own speakers from the college faculty."

The survey, though covering the orchards of but seven hundred growers of the state out of a thousand or more, gives sufficient background for comparison of methods and results. The college experts have had opportunity

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—only engine running on coal oil successfully; uses alcohol, gasoline and benzine, too. Starts without cranking. Only three moving parts—no cams—no sprockets—no gears—no valves—the utmost in simplicity, power and strength. Mounted on skids. All sizes, 2 to 20 h. p., in stock ready to ship. Engine tested before crating. Comes all ready to run. Pumps, saws, threshers, churns, separates milk, grinds feed, shells corn, runs home electric lighting plant. Prices (stripped), \$29.50 up. Sent any place on 15 days' Free Trial. Don't buy an engine till you investigate money-saving, power-saving "DETROIT." Thousands in use. Costs only postal to find out. If you are first in your neighborhood to write, you get Special Extra-Low Introductory price. Write! (118)

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**2½ H. P. Stationary Engine — Complete**

Gives ample power for all farm uses. Only three moving parts—no cams, no gears, no valves—can't get out of order. Perfect governor—ideal cooling system. Uses kerosene (coal oil), gasoline, alcohol, distillate or gas. Sold on 15 days' trial. **YOUR MONEY BACK IF YOU ARE NOT SATISFIED.**

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**BEST IMPLEMENT  
FOR ORCHARD CULTIVATION**



**Kimball Cultivator at Work in Orchard at Morrisania**

For maintaining a dust mulch in an orchard and for keeping down weeds the Kimball Cultivator is without an equal. Its blades cut about three to four inches under the surface of the soil, pulverizing the soil and leaving it level; all weeds are cut and germination of weed seeds prevented by leaving the soil in loose condition.

The Kimball Cultivator works well out from the horses, and soil can be stirred close to trunks of trees, with horses walking out in the open. The Kimball takes a wide sweep at a time, and eight to ten acres of orchard can be cultivated per day. Thousands of Kimball Cultivators are now in use, and every person who has one recommends it. Mr. Irvine, editor of *The Fruit-Grower*, used two Kimball Cultivators at Morrisania last season; ask him what he thinks of them. Ask him also if the Kimball is not an ideal cultivator for any part of the country; he will tell you it is an ideal soil-stirring implement.

## Clean Cultivation of Orchards Pays

It not only conserves moisture, but destroys the hiding places of insects, such as eurolia, which are often serious orchard pests. Apples grown in cultivated orchards ripen later and consequently keep longer; they are of larger size and are usually smoother. The cost of cultivation is not excessive if Kimball Cultivators are used. Send for free booklet describing this great orchard implement—it's free for the asking.

**W. A. JOHNSTON, Manufacturer**  
**THE DALLES, OREGON**

WHEN WRITING ADVERTISERS MENTION BETTER FRUIT

to study prune growing as regards the different soils, elevations and exposures. The adaptability of certain varieties to different exposures and locations has been made a special study, as well as the methods of orchard tillage, pruning, spraying and handling the crop in different orchards. The handling of the green prune, as well as the methods employed in handling the dried article, will be taken up in detail in the short course, with the various systems used, such as steam driers and funnel driers. The processing and marketing of the product will also be made a part of the course. Besides visiting the orchards the inspectors have been studying the evaporating plants and the principal processing concerns of the Northwest, and thus will be in a position to give definite information in the short course on the different methods used and the construction most favored. The special effort has been to determine the successes and failures in prune growing, and the reasons. Factors found to be of importance were not only the methods of managing the prune orchards, but the relation of the acreage to the building and management of the evaporators and the other lines of agriculture used in combination with the prune growing.—Contributed.

## Making Natural Fruit Jams

"Those who have never tasted the natural fruit jams do not know what they have missed," said Professor C. I. Lewis of the division of horticulture at the Oregon Agricultural College, discussing the aroma of "jell and preserves" now arising from the culinary part of all homes. "Once they have tried, the taster will never go back to cooked jams," he said. "Such fruits as red and black raspberries and strawberries make a most delicious uncooked jam, and one can enjoy a very palatable shortcake in the middle of the winter at very little expense.

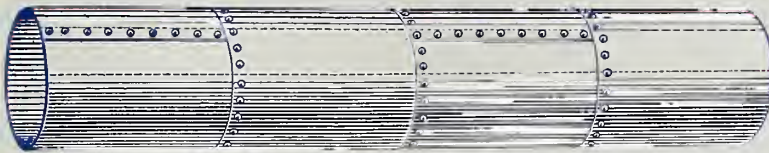
"To prepare this jam be sure first that your berries are sound. Throw out all soft, mouldy or in any way decayed fruit. This is imperative. Then mix equal amounts of sugar and fruit and crush the whole mixture carefully. Be sure that no berries are left whole. Before putting into the jars some people stir the fruit occasionally for several days to be sure that the sugar and fruit become thoroughly mixed. After the fruit and sugar have been mixed thoroughly put them into fruit jars, but do not seal them. The only covering that should be given them is a little paper to keep out dust. If the jars are sealed the chances are that the fruit will spoil, but if left unsealed it can be kept for some time. I have kept it for two years. Red and white currants treated this way make a delicious jam. This jam is somewhat different from that known as sun-dried jam. The sun-dried jam is cooked somewhat. The flavor of the fruit in the natural jam is preserved."—Contributed.



# COLUMBIA ENGINEERING WORKS

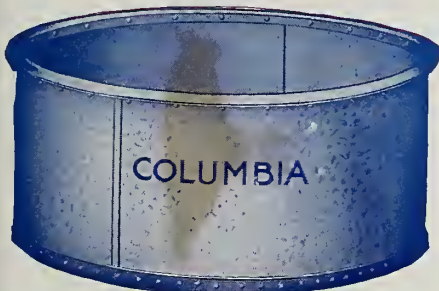
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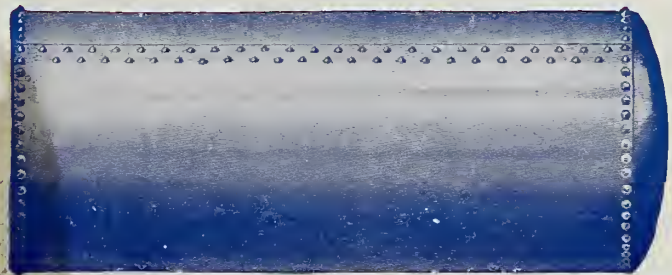


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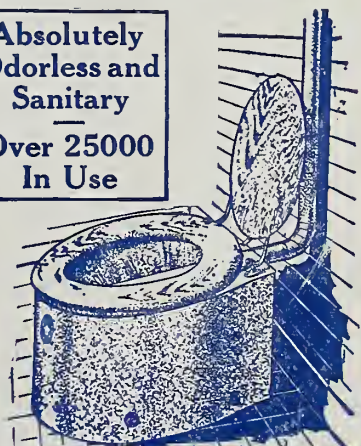
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If you contemplate placing your apples in cold storage in the East, we would advise making early arrangements, as space will be contracted for at an early date.

Write or wire us what you expect to ship, naming the varieties as well as the quality and quantity.

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